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ABSTRACT

This study undertook the following tasks: (1) to review the social science literature on sex roles, sex role socialization and sex discrimination in education; (2) to develop a model that accounts for sex discrimination and indicates how to eliminate it; and (3) to design a program to test the model developed. The study made several assumptions. First, it took the point of view that most scientific work on these problems is fundamentally flawed because it is based on an empiricist and positivist conception of science, instead of a dialectical conception. Second, the model of sex-role transcendence which was employed implies that sex discrimination occurs because individuals and institutions are stuck at an intermediate and incomplete stage of sex-role development. (Author)

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SEX-ROLE TRANSCENDENCE STUDY

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Sex-Role Transcendence as a Guide to Intervention in Educational Systems to End Sex Discrimination in Education

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Sex-Role Transcendence as a Guide to Intervention in Educational Systems to End Sex Discrimination in Education

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ABSTRACT

The Sex-Role Transcendence Study may be summarized in terms of the points of view which emerged from this investigation concerning the three tasks defined. The three tasks are:

1. A review of the social science literature on sex roles, sex role socialization, and sex discrimination in education;
2. Development of a model that accounts for sex discrimination and indicates how to eliminate it; and
3. Design of a program to test the model developed.

And the points of view concerning each of these tasks, growing out of our theoretical developments and review of the literature, are:

1. Most scientific work on these problems is fundamentally flawed because it is based on an empiricist and positivist conception of science, instead of a dialectical conception. Positivist science (as understood here) claims to be universal in time and space, dialectical science (as understood here) is specific to the socio-cultural and historical context; positivist science is allegedly value free, dialectical science is imbedded in valuing human beings; positivist science emphasizes stability and the status quo; dialectical science stresses contradiction and change. In particular, previous research has been carried out in societal-historical contexts that supported the submission of and the inferiority of women to men, hyper-polarized and differentially valued sex roles, and the selective exclusion of women from many aspects of the society. Since the research was believed to be objective (but was not), the research methodology, choice of topic areas, conduct, and results all served to support these societal conditions.
2. According to our model of sex-role transcendence, sex discrimination occurs because individuals and institutions are stuck at an intermediate and incomplete stage of sex-role development. In our three stage model, sex-role development proceeds from undifferentiated

roles (Stage I, infancy to early childhood); to differentiated roles (Stage II; subdivided into three substages: IIA, the earliest age at which differentiations are learned but not necessarily consistently practiced; IIB, hyperdifferentiated feminine and masculine roles; and IIC, in which feminine and masculine roles are still differentiated, but an individual woman or man is able to engage in either as the situation requires [androgyny]); to transcending of sex roles (Stage III, a pluralism of possible roles, over time and over people, not linked to biological sex and not limited to presently available roles).

Society (including social science) presently fails to recognize this full developmental sequence, and instead regards IIB (hyperdifferentiated sex roles) as the "end point" of normal sex-role development. Therefore, individuals are constrained to truncate development at Stage IIB, and discriminatory institutional and organizational practices are made to "fit" IIB people. Nonetheless, many people already violate the rigid stereotypes and move on to Stage IIC and toward Stage III of sex role development. In our view, the explicit encouragement of further individual development (to IIC and III) and institutional change in the direction of facilitating and accomodating such changes will lead to the end of sex discrimination.

3. Our model asserts that sex discrimination in education can be ended by changing the people (students, teachers, administrators, parents . . .) in educational institutions toward Stage IIC and Stage III sex role development and simultaneously changing institutional structures, patterns, and goals so that they are non-discriminatory and facilitating of such people. Therefore, the test of our model involves experimental intervention in selected school districts and colleges with an advocate program designed to carry out such changes, by working with constituencies of students, community organizations, parents, and employees in training, social change, support networks, etc. Crucial control groups would consist of comparable organizations with no program attacking sex discrimination, and other organizations with change strategies predicated on other models of eliminating sex discrimination. Evaluation of the program is described in terms of measures of individual sex-role development and measures of changes in indices of sex-discrimination in the organizations.

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PREFACE

This is the final report of a three-phase research program on Sex-Role Transcendence carried out at the University of Michigan under Contract # NIE-C-74-0144, with the National Institute of Education.

For a complete understanding of the present document, it should be read in conjunction with the preceding publications (NIE, 1974; Hefner, Nordin, Rebecca, and Oleshansky, 1974; Oleshansky, Rebecca, Hefner, and Nordin, 1974; Hefner, Rebecca, Oleshansky, and Nordin, 1975a; Rebecca, Oleshansky, Hefner, and Nordin, 1976). [All references cited appear in the Bibliography, page 57. In addition, there is a chronological list of publications, papers, and addresses associated with the project appended, page 61.] However, this Final Report is intended to be intelligible on its own. In particular, the Phase I Literature Review and the Phase II Development of the Model of Sex-Role Transcendence are both summarized in the initial sections of this report. Because the legal portion of this study is directed at rather different questions and audiences, the final report of that portion is published separately.

The charge to us from NIE in this research program was to develop a model accounting for sex discrimination in education and to develop (but not to carry out) a procedure for a "meaningful, generalizable, and adequate test of the . . . model" (NIE, 1974, p. 9). In what follows we develop a position showing why such a test is possible only in the context of a large-scale program of intervention in sex discrimination in ongoing educational systems (school districts and colleges). We are not uncommitted observers: we earnestly hope that this program or some other equally ambitious attempt is funded and carried through to end sex discrimination!

Acknowledgments:

Numerous assistants, friends, and colleagues have helped us in this work from the beginning, and a number are named in previous reports. We wish to thank the following people who have been particularly helpful in developing ideas leading to and actually preparing this final report: Linda Adams, Berenice A. Carroll, Mark Chessler, Delwyn Ehresman, Clinton F. Fink, Kaye Ghastin, Gary Gregg, Jan Hartwell, Sandra Kinghorn, Patricia Paul, the late Klaus Riegel, Gayle Russ, and Kathy Zick. Of course, the authors are solely responsible for the interpretation of ideas and the final form in which they are presented here.

I. REVIEW OF LITERATURE ON SEX ROLES

This project began with a review of the literature on sex role socialization, sex discrimination and other forms of discrimination as background to the effort to develop a conceptual model of the process of sex discrimination. (See the Phase I Final Report (Hefner, et. al., 1975a) for the complete discussion of the literature review.) From the perspective of a critique of traditional science, we illustrate there how the traditional literature in those areas perpetuates a view of women and of women's capacities as inferior to men and to men's roles. That is, the conventional view holds that science is: 1) rational--advances come in a logical progression; 2) continuous--change is gradual and cumulative; 3) universal--data based theories are not culture-bound; and 4) value free--scientific knowledge is ethically neutral.

From historical, sociological, and philosophical analyses of what science is about (contrasted with what "normal" scientists say it is about) (Kuhn, 1970; Popper, 1965, 1968; Toulmin, 1953, 1961; Lakatos & Musgrave, 1970) it is possible to dispute all four of these points. Radical critiques of the conservative functions of science in our present society (Coser, 1956; Mitchell, 1971; Brown, 1973) show how normal science supports and perpetuates existing ideas, such as the inferiority of women.

The traditional social science paradigms of sex-role socialization and sex discrimination grew out of and contain the biases and polarity of the society in which the scientists themselves live. Yet these scientists claim that their paradigms reflect the facts, i.e., the "real" nature of masculinity and femininity. They thus affirm and reinforce public stereotypes of sex roles as scientifically accurate. This circularity rests on traditional scientists' claim that science is value-free, ahistorical, universal and that scientific conclusions are based on reliable, valid and generalizable results obtained by objective empirical research. Since this claim is believed by most scientists who make it, and by the general public, research often strongly reinforces traditional values. As long as behavioral scientists, employers, and social environments continue to have sex-role biases, traditional science will continue to support the status quo.

Many of the biases have become so pervasive that they are embedded in the structure of science itself, rather than in any particular content. Statis-

tical methodologies emphasize differences and obscure similarities. Theories take the present order of things as a given, not as a problematical situation to be explained. Models tend to be oriented toward equilibrium and adjustment, not toward change and conflict. One consequence of this last point is an excessively psychological orientation, stressing the adjustment of the individual to the assumed unchanging society. Review of literature on discrimination in other areas (particularly race) indicated that these biases (e.g., excessive psychologizing, emphasis on unchanging traits, emphasis on differences) are not restricted to sex.

Methodologically, this image of science stresses one-variable studies since they can be better controlled, and results can be combined because they are additive or, at the most, multi-variable studies within a single disciplinary context. The genuine interactive complexities of the real world are ignored. Research strategies and statistical techniques emphasize differences between groups, and group data over understanding individuals.

Of the assumptions of the traditional literature reviewed in Phase I perhaps the most salient is the general belief that women and men differ in critical ways relating to but not necessarily directly involving the division of the sexes based on their reproductive functions. Women are the childbearers. Historically, that biological function has been extended to include childrearing as well as creating, maintaining and remaining exclusively in the domestic sphere. Men create and define the public sphere, which was originally set up in such a way that the domestic sphere (by definition) was subsumed by that male-oriented public arena. That is, men determine the parameters of the overall social order and social structure and create the attendant value systems. The dichotomy between the female/domestic sphere and the male/public sphere, by its nature, gives men power over and greater societal value than women. The over-riding emphasis on highlighting historically constant sex role differences and on under-emphasizing or totally ignoring similarities between the sexes pervades the literature reviewed.

The goals of traditional sex role socialization studies and of investigations of institutional structures are to understand how socialization agents produce "properly" socialized individuals and how those individuals then fit into and maintain existing social institutions. Biological sex is the only criterion used for assignment to a sex role; the sex role encompasses, however, far more than simply what role the individual will play in reproduction. It defines for the individual appropriate ways to function, intrapsychically and

socially, under all environmental and personal conditions.

Following directly from the methodological and philosophical shortcomings, many social science theories see the present state of sex-role socialization and the position of women in society as unchanging and some believe it is unchangeable. Often, when an analyst sees limited changes as occuring, he ascribes the continuing problems to "cultural lag," as if that were an explanatory variable, thus missing to socio-cultural dynamic in which there is continuing active support for the oppression of women. In common with other domains of social science, there is a pervasive tendency to "blame the victim," that is, to see the personal dysfunctional results of sex discrimination as if they caused the problem in the first place. The ahistorical orientation emphasizes traits as permanent and unchanging. In addition, adult masculine characteristics are seen as the ideal, and other individuals are quantitatively evaluated in terms of their proportionate achievement of this ideal. Sex roles are conceived of as polar-opposites, with a clear evaluation of one pole as positive, the other negative.

II. A MODEL OF SEX-ROLE TRANSCENDENCE

We conclude from the observations of the methodological and philosophical deficiencies that a new orientation is needed; a dialectical orientation, stressing the social-historical context, emphasizing conflict and change rather than equilibrium, and dealing interactively with the multiple determinants of real lives. In our understanding, dialectics is not a "theory" but a meta-theory; a set of principles about what any theory must do and account for. One particular empahais of a dialectical orientation is that limited and even incorrect past work is not lost; rather, a new synthesis is developed which makes sense of the previous work in its own limited historical context.

Dialectics focuses on conflict and contradiction. It is oriented toward movement and relations as opposed to equilibrium and stable entitles. Sex role socialization is not accounted for solely by piecemeal accumulation of information or solely by closed cognitive restructuring of the world. Development proceeds most emphatically when conflict or asynchronization exists between any two of four planes of development: a) inner-biological; b) individual-psychological; c) cultural-sociological; and d) outer-physical (Riegel, 1975). Conflict can occur among any of these planes at any point in an individual's life. The dynamic interplay of these conflicts over time results in growth

and change. The resolution of conflict ushers in a new level of synchronization which is the beginning of a new interaction process.

It is apparent from the dialectical approach that balance or equilibrium is not the most interesting or useful state to study; that to study merely the resolution of a conflict and not its source and further consequences obscures the process by which people develop. It is also apparent that the reduction of process to traits creates abstractions which do not reflect reality. This is where a dialectical approach to sex roles departs most severely from traditional psychological theory. Traditional theory is based on abstractions, stability, and universality. By devising abstract constructs to explain human behavior, psychologists create ideals which in fact do not explain or even describe accurately what people are like. By imposing abstract constructs on people, they become objects rather than subjects, detached from the historical-cultural milieu of which they are a part.

The traditional literature on sex roles assumes a two step model of development. Children begin life with an undifferentiated conception of sex roles and as they progress, adopt the one appropriate to their biological sex. Thus, just these two stages are believed to fully account for the sex role development of the person from birth to death; in the traditional paradigm, development beyond highly differentiated sex roles is not acknowledged at all or is seen as deviant. The two-stage paradigm has been a major assumption of scientific studies as well as a prescriptive statement about how "normal, average" people should be with regard to their femininity or masculinity.

A "higher" stage of sex role development was inconceivable until very recently when several authors began to suggest that possibility (Pleck, 1975; Heilbrun, 1973; Hefner, et. al., 1974, 1975b). Unlike theories of cognitive development (Piaget, 1970) and moral development (Kohlberg, 1964), which posit the existence of a stage <u>after</u> the conventional, polarized stage of functioning, theories of sex role development have been fixated at the stereotyped, over-differentiated plateau. We too start with the traditional paradigm, but extend that limited two stage model of sex role development (which we believe promotes and perpetuates stereotypes and discrimination) to include a third stage of functioning: a flexible, dynamic and transcending stage of development in which individuals and institutions adopt and internalize <u>human</u> characteristics and roles, unfettered by the constraints of the stereotyped traditional cultural conceptions of femininity and masculinity. Adaptive characteristics and flexible role demands allow the individual and the institution to freely choose behaviors/attitudes/emotions appropriate for the particular person or

specific role at a given time.

The model we propose is patterned after the stage models of developmental psychology, for example, Erikson's (1963) model of personality development, and patterned more specifically after Pleck's (1975) three-stage model of sex-role identity development. It is also closely related to Hegel's theory of the history of rational thought (Lawler, 1975).

Briefly, the model of sex role transcendence conceives of sex role development as proceeding through three major stages (see the Phase II Final Report [Rebecca, et. al., 1976] for a more complete explication of the model). Stage I is the stage during early childhood when sex roles are undifferentiated and have little relevance for the child, both in terms of the child's own conceptions and of the expectations of others for the child. Stage II is divided into three distinct but related substages. In general, it is characterized by the overall relevance of sex roles for behavioral, attitudinal, emotional and other choices available to and expected of the individual. Stage IIA is the transition from the undifferentiated view of sex roles of Stage I to an understanding that there are two sexes and two genders. But the child in Stage IIA has not yet fully adopted the sex role "appropriate" to her/his biological sex and does not understand the values attached to doing so. Also the child is allowed by parents and society to make seemingly random or unimportant sex-inappropriate choices. Stage IIB is entered when the child fully understands the value of appropriate sex role behavior and accepts the sex role assigned to her/his own sex and rejects the other sex role. During Stage IIB the conventional feminine or masculine stereotypes are expected to define and to describe the individual under all circumstances. Stage IIB is a hyperpolarized, oppositional view of sex roles. Rigid adherence to one's appropriate, traditional sex role is demanded of—or at the least, believed by the individual to be required of--that individual. This is the substage which denotes the end of sex role development in the traditional paradigm. Stage IIB characterizes most individuals and institutions in the U.S. today. But recent theoretical and empirical research (e.g., Heilbrun, 1973; Bem, 1974, 1975, 1976; Spence, Helmreich and Stapp, 1974) has shown that some people (mostly late-adolescent and adult) display characteristics of both sex roles. This phenomenon has been labelled androgyny. We believe that what is called androgyny by these investigators is a transitional substage existing between Stage IIB and a stage in which sex roles are transcended and in which gender loses its relevance and substantive meaning, i.e., Stage III (see also Bem, 1976). In our schema this

androgynous conception of sex roles is called Stage IIC. In this transitional stage the individual is still immersed in and relatively limited by the traditional definitions of femininity and masculinity and conventional conceptions of sex roles. Nevertheless, during Stage IIC the person begins to experiment with components of both sex roles. This experimentation is similar to that undertaken in Stage IIA. In Stage IIC, however, the differentiation between femininity and masculinity is potentially understandable on a hypothetical-abstract level by the individual (although perhaps this is not consciously acknowledged), whereas in Stage IIA the child is not capable of making such a differentiation and uses parts of both sex roles more or less randomly and/or concretely. In Stage IIC the individual has a cognitive and behavioral understanding of both sex roles and of the myriad of options available depending on the situational and/or personal appropriateness of those choices. Sex role transcendence, Stage III, currently exists only as a hypothetical, potential stage of flexible, open-ended development in which individuals make choices based on those situational and/or personal requirements without reference to traditional sex role constraints. Femininity and masculinity have no substantive meaning whatsoever in Stage III.

Unlike previous work in the area which is incapable of considering multiple interactive processes, the model of sex role transcendence necessitates exploration of many determinants of sex role socialization and their interaction as well as the contradictions which are the basis for growth. As Riegel (1973) suggests, equilibration in the Piagetian sense denies contradictions as a basic property of thought and creativity. A Stage IIB society, one which has reached equilibrium with regard to sex roles, actually is in a state of arrested development. By using a dialectical interpretation of development, the model of sex role transcendence allows for continuous growth and change. From our perspective, the activity within and between each stage is more important than the description of stages. The stages themselves can be thought of as a temporary product of a certain type of thinking (e.g., polar versus transcendent) about certain issues. They are helpful in understanding where growth is coming from and where it is going. However, the movement itself is critical to this model in which individual and societal change is the focus. Thus the dialectical model attempts to extend the paradigm of sex role learning beyond the conventional, stereotyped level and even beyond the symbolic and hypothetical level to a dialectic level which captures the natural interaction of people with a continuous, interpenetrating and ever changing world (Riegel, 1973).

The necessary prerequisites of the transition to Stage III evolve over a long period of time. While learning the polar conception of sex roles, the individual learns the components of both poles (Lipman-Blumen, 1973). (In a Stage IIB society, the differentiated learning does not produce alternatives and options, but prohibitions instead.) Actual performance as manifested in Stage IIB depends on overt and covert environmental reinforcement. The individual in Stage IIB (and later in IIC) has a considerable amount of latent knowledge with which to work. The problem of how to use it in developing new skills, a new life-style or a new approach to the world becomes salient only when the individual is confronted with contradictions or crises that force the issue. For example, a woman may have accumulated a certain amount of expertise in a traditionally male dominated occupation but when she applies for a job encounters many levels of discrimination. This is an asynchronization between the individual-psychological plane and the cultural-sociological plane. Depending on the accumulation of similar past experiences and on how striking this conflict appears to the woman she may begin to undergo a transformation from Stage IIB to IIC toward Stage III. How she fares depends on a number of personal and environmental variables.

Our culture provides few invironments in which a Stage IIC (a potential Stage III) person will "fit," few social roles that will actualize her potential and enable her to completely "feel at home" with Stage III identity. More environmental supports for transcendent behaviors and the provision of more roles which would accomodate transcendent behavior would facilitate movement from Stage IIB to Stage IIC and ultimately to Stage III. Intervention at this structural level is necessary to enable more and more people to make these transitions. The elimination of the cultural stereotypes and definitions of femininity/masculinity are also necessary for transition to III. As more people make the transition, more structural and definitional changes will ensue and vice versa.

III. ALTERNATIVE MODELS OF THE ELIMINATION OF SEX DISCRIMINATION

The model of sex role transcendence posits the potential existence of a dialectical stage of sex role development (Stage III) beyond the hyper-polarized, conventional, stereotyped level (Stage IIB) and even beyond an androgynous conception of sex roles (Stage IIC). Alternative models which are also concerned with the alleviation or elimination of sex discrimination in education and in society can be analyzed and criticized in terms

of the model of sex role transcendence. As described below, the other models may be seen as truncated versions of our model; in most instances, however, these models have not been described originally in developmental terms.

All of the models begin by criticizing the current state of asymmetrical valuation and treatment of the sexes in which women are inferior to men. This shared starting point may obscure the fact that critical differences exist in the outcomes desired by proponents of the different models and thus, in the methodological implications for change in these models.

The Equality Model

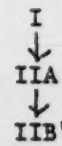
The first such model is one which requires the preservation of the traditional division of the sexes (e.g., Morgan, 1973; Andelin, 1965). Women and men are believed to be fundamentally different on all or most relevant dimensions; the conventional, rigid dichotomy between women's and men's roles, spheres of influence, personality attributes, behaviors, etc., is seen as natural and proper. Proponents of this model believe that the dichotomy may even be in need of greater polarization and those poles in need of strengthening since there has been an unacceptable blurring of the boundaries in recent years (e.g., Winick, 1968). Such needs are often expressed as a desire to return to the alleged historical division of the sexes in which the stereotypes were clearly distinguished and distinguishable, i.e., when the meanings of femininity and masculinity were generally accepted. What this model purports to want changed, which would presumably eliminate sex discrimination, is the lower valuation and status of women and of women's traditional maternal/domestic roles. Using our model's terms, this altered conception of sex roles can be designated as Stage IIB'. (See Figure I for a graphic representation of the various models.) Stage IIB' retains and even strengthens hyperpolarized sex roles but the asymmetry that presently exists is eliminated. That is, women and men in this view should be equally valued and accorded equal status in the carrying out of their traditional and "proper" functions. An example of the way this model would propose to attack sex discrimination through education might be to require the training of women for their ultimate reproductive role comparable to the training already given to men for their productive roles. The emphasis would be on recognizing, reinforcing and supporting the importance of women's conventional roles without attempting to change those roles.

We believe that continuing the rigid dichotomization of the two sex role poles, <u>even if</u> temporary status equality could be achieved, would be at best an unstable solution. The danger is great that the unequal valuation of the

Traditional paradigm

hyperpolarized sex roles with pervasive sex discrimination due to asymmetry of valuation

Equality Model

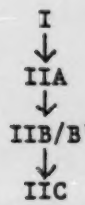


hyperpolarized sex roles given equal status value, thus no sex discrimination

Homogeneous Model: Assimilationist

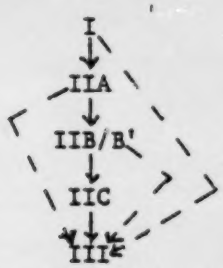
women assimilated to male model, single outcome therefore no basis for sex discrimination

Homogeneous Model: Melting Pot



blending of sex roles, single outcome: androgyny, therefore no basis for sex discrimination

Sex Role Transcendence



irrelevance of sex roles, multiple outcomes, emergent pluralism, elimination of sex role polarity and sex discrimination

Figure 1. Models of the Elimination of Sex Discrimination.

sexes would reassert itself in a society such as ours, in which there is much evidence that traditional women's roles are becoming increasingly limiting and limited. Much of the content and functioning of traditional women's roles are manifestations of cultural lag. This view does not account for facts like the overwhelming predominance of small families and the increasing number of productive years a woman lives beyond the time her youngest child enters school. Also, the statistical studies depicting the large number of mothers who must work outside the home to insure the families' survival show that this model does not accurately describe the current situation or the predictions about the increasing number of women who will work outside the home in the future. This model does not consider women who choose not to marry and/or not to have children. Thus, the goals of this model would do little to improve the situation of women who cannot or will not accept the traditional feminine stereotype of wife/mother. Further, this model does not allow for multiple outcomes since it prescribes a system in which there is a single possible outcome for each biological sex. This model thereby dictates individual and situational choice based entirely on biological sex. The equality model does not adequately account for variance in the population and must label as deviant a large number (perhaps the majority) of women.

The Homogeneous Model

The second model is one which is actually made up of two distinct variants. Both desire change away from the conventional stereotypes of Stage IIB toward an endpoint of a more homogeneous conception of sex roles. The first is best described as an assimilationist model in which sex discrimination is alleviated or eliminated by helping women to assimilate to the male model. Educationally, this means providing women with opportunities to learn traditionally masculine skills. Women would then be able to successfully fill, and compete with men for, traditionally masculine productive roles. For example, assertiveness training for women would be emphasized so that women would be more like men on that dimension. In our terms, this would be a kind of Stage IIC (see Figure I) but it is seen as an endpoint of development by the assimilationist model. In this kind of Stage C, all individuals arrive at that final stage similarly socialized and educated according to the traditional masculine stereotypes. (There is also the logical inverse of this--assimilation of males to the female model. This has been discussed briefly in some feminist-pacificist writing, as the step required to eliminate war; however, it seems unlikely to be a chosen

model in a male dominated society.)

The second variant of the homogeneous model is the melting-pot model. (The melting pot version is similar to what we refer to as Stage IIC in the Final Phase II Report, Rebecca, et. al., 1976.) In this view, women and men are socialized and educated to be competent in and to display both traditional feminine and traditional masculine characteristics. All individuals would display a combination of feminine and masculine personality attributes and behaviors and would fill both feminine and masculine roles. Thus, in this model the status asymmetry between the sexes would be eliminated because of the combination of both traditional sex roles in each individual. The lack of a clear distinction between femininity/feminine roles and masculinity/masculine roles would eliminate the target population of sex discrimination. Training women for masculine roles and training men for feminine ones would be empahsized in education, along with the training of individuals according to their own traditional role, which would continue as it has historically. The truncation of the melting-pot version at Stage IIC indicates that the traditional definitions of femininity and masculinity would be preserved. Like the assimilationist version, it also dictates a single acceptable outcome, which it often labels androgyny. It is obvious that feminine characteristics would continue to be seen as inferior and in need of abandonment in the assimilationists' view; it is likely that feminine attributes, roles and so on, would remain less valued even in the melting-pot perspective since femininity is so pervasively defined and characterized in relatively negative and inferior terms. Therefore, when Stage IIC is conceived of as an endpoint of sex role development, the asymmetry between the sexes is perpetuated in many ways. Sex discrimination cannot be eliminated but can only be somewhat modified. [It should be noted that Bem (1976) does not see androgyny as an endpoint. She explicitly describes sex role transcendence as a next step after androgyny.]

The Model of Sex Role Transcendence

In neither variant of the homogeneous model can a woman choose to be predominantly or entirely traditionally feminine for any prolonged time period. In the melting pot version, this is also true of men with regard to masculinity. The model of sex role transcendence, though, allows for multiple outcomes in Stage III in which there is an emergent pluralism. Individuals can be primarily "feminine" or "masculine" for a period of time or even for their entire post-puberty life span. (But, of course, "feminine" and "masculine" cannot have the

same subordinate and superordinate meanings in a Stage III society that they do in the present male chauvinist society. The critical difference is that the choice is not determined by the biological dichotomy which is imposed at birth when conventional sex role expectations are ascribed. Rather, role behavior and role adoption in Stage III are chosen, and are informed, aware decisions on the individual's part. In fact, in Stage III it is possible that some biological males would adopt predominantly "feminine" human roles or some biological females would choose only "masculine" roles. Individuals can also be what looks like some combination of traditional "feminine" and "masculine" characteristics (i.e., they can be androgynous). Most uniquely, individuals can adopt an entirely new way of being in Stage III which is totally unrelated to traditional gender roles. What distinguishes Stage III from the other stages and the other models is that human roles, behaviors, characteristics (except for those directly related to reproduction; see the Phase II Final Report, Rebecca, et. al., 1976) are not defined, assigned or adopted on the basis of biological sex and conventional assignment to sex roles. Clearly, Stage III individual development can only occur in a broad segment of the population when the society is drastically changed and in which powers that have created sex-role polarization to serve their interests have been supplanted.

By positing a series of sequential stages and the existence of an open-ended dialectical stage of human roles, the model of sex role transcendence accounts for most or all of the possible variance in the population and purports that growth and change can be ongoing processes. Sex role polarity and sex discrimination can then be understood to exist partly because of a truncation of development. Sex discrimination can be alleviated by moving toward a temporary Stage IIC; and it can be eliminated by the achievement of Stage III, in which gender roles are irrelevant and have no substantive content, and sex roles relate only to reproduction. Educationally, this means helping students achieve an understanding of the very limited implications directly related to the biology of reproduction. It also means helping students find what is personally and situationally adaptive for them. Lastly, it means maintaining the belief that development can eventually transcend traditional sex roles and that those gender roles can become irrelevant.

The model of sex role transcendence further asserts that a particular set of interrelated problems cause sex discrimination in education; simultaneously, this model instructs us in how to achieve an education system that does not

discriminate on the basis of sex. We need to turn now to the very complicated task of explicating what changes are required that will result in sex-role transcendence, that is, what is a sex role transcending educational system? The implications for education and for methodology following from this model are described below.

IV. CONFLICT AND CONSENSUS MODELS OF THE EDUCATIONAL SYSTEM

In proposing plans designed to alleviate and (eventually) eliminate sex discrimination in education, the immediate observation is that this requires massive change in the educational system in the United States. It is well known that schools are societal institutions designed to achieve societally determined and supposedly consensually shared goals, and that schools are generally designed to preserve the status quo of the society at large (e.g., Spring, 1972). Indeed, schools serve a conflict management function for society (Crowfoot and Chesler, 1975), dampening incipient crises and avoiding the changes such crises may precipitate before the problems can affect other societal institutions. This is largely achieved through the channelling and preparing processes of education which preserve and continue the traditional order of the society while at the same time legitimating the existence of conventional social divisions. It must also be acknowledged that the educational system itself, like other organizations, has as a primary goal the maintenance of its own institutional status quo and the perpetuation of its own internal existing structure.

The elimination of sex discrimination is seen as necessary to directly change the roles of women and men in the educational system and thus, to indirectly and directly change the sex discrimination pervasive in society. Any proposed changes in a dynamic such as sex discrimination, which is basic to the educational system and to the society, however, involves creating new conflicts and highlighting existing conflicts in the entrenched order of those entities. Not only do the organizational structures of schools clearly reflect the societal picture of sex discrimination, they create and recreate sex discrimination in new generations of students as these "products" of our educational system are channelled and trained to fill their ultimate roles in society, according to the student's biological sex (among other classifications). Disrupting the circular process of sex discrimination in schools and in society, then, involves coming to terms with basic conflicts long buried in the previously accepted norms about women and men (e.g., Flexner, 1973) and creating new

conflicts unable to exist before these norms were called into question. If the structure of schools is designed to continue--has a vested interest in continuing!--as it is, and if among the major societal purposes of schools is to deny conflict and to regulate conflict that cannot be denied, then changing the existing patterns of sex discrimination threatens these basic organizational goals and functions. But this threat and the fear it engenders exist only if conflict and change are seen as destructive forces and if the maintenance and perpetuation of the present status quo is glorified: a status quo which includes sex discrimination at its foundation.

Conflict versus Consensus in Schools

There are, though, at least two different models of organizations, the consensus model and the conflict model (Crowfoot and Chesler, 1975) (see Table 1). These are broadly distinguished by the overriding belief in the consensus model that divisions such as sex, race and socioeconomic status represented within the organization are irrelevant to the organization's functioning. In the conflict model social divisions are seen as fundamental. In the consensus model it is assumed that decision-making power is given to the authority structure and is backed by the trust of all members of the organization, who see the authorities as making decisions in everyone's best interests. In the conflict model, it is assumed that power is arbitrarily taken by the authorities and that decisions are made on the basis of that power, without the trust or agreement of other groups.

The consensus model. This model of organizations is currently the dominant paradigm in social science analyses of organizations. As anticipated above, it best reflects the underlying structure and assumptions on which the American educational system is based. That is, according to this model there is the assumption that systemwide agreement exists on the appropriate and morally correct norms, goals, purposes, authority structure and decision making within the institution. Procedures, administrative policy, content, rules, problem-solving and the handling of deviants are seen as devised and instituted by the authorities in their roles as trusted implementers of commonly held values. The consensus model is founded on the myth that there is no real conflict between different groups in society and that social divisions between members are irrelevant to the overall functioning of the organization. This grows out of the fundamental assumption that different classes of individuals share the same societal norms and goals and that they trust the decision makers to achieve the ends all universally share as right.

TABLE I

A COMPARISON OF THE CONSENSUS AND CONFLICT MODELS OF ORGANIZATIONS

Organizational Parameters	Consensus Model	Conflict Model
1. Goals	Held in common; mutual or reciprocal	People have different goals which are not necessarily mutual or reciprocal. Basic divisions determined by race, class, sex, etc.
2. Membership Patterns	Different categories of membership exist but do not matter, i.e., they are irrelevant	Categories reflect the larger divisions of society; there are fundamental tensions between categories
3. Norms	People agree on basic values which govern life; universal norms exist which are good; deviants who disagree are seen as unadjusted	People disagree on values; moral norms are in contest; differences reflect race, class, sex, etc.
4. Patterns of Social Interaction	Resolves differences	Clarifies differences
5. Power Structure	Power wielded in trust; authority is legitimate and appropriate	Authority is arbitrary, reflects status, influence, etc. Power structure is deliberately made mysterious
6. Technology	Appropriate to aims	Arbitrary and part of the overall plan which maintains system as it is
7. Boundary Maintenance	Appropriate	Arbitrary and channels different classes of members differently reflecting original organizational and societal structure

The consensus model does not acknowledge that conflict (e.g., of interests) exists and thereby, this model actually encourages covert conflict. At the same time, this view supports education's role as a societal regulator of conflict and suppressor of change. We believe that to adhere to a consensus model of education is to ignore the role that education plays in creating and perpetuating sex discrimination and the potential progressive role education could take in helping to eliminate sex discrimination.

Using a consensual perspective, the upholding of sex discrimination is deemed an appropriate function of education. This fundamental role of education, thus, legislates against an awareness of the ways actually necessary to change the process of sex discrimination. Certainly, the perpetuation of sex discrimination as a basic educational function is a largely latent/unconscious goal in the United States today. Indeed, there is rhetoric by the proponents of a consensus model of education about the inequitable position of females in our schools and society and the urgent need to rectify that oppressive situation; but it is rhetoric that does not result in effective action.

When a consensus model is assumed (explicitly or implicitly) the overwhelming structure of the educational system can be seen as created and maintained in ways that make it impossible for more than superficial changes to occur. And even such superficial changes as do occur are often used to reinforce the model, while paying rhetorical lip service to genuine change. (A good example is the promotion of a few "queen bee" or male-model women--followed by the claim that the success of a few isolated women "proves" that the system is non discriminatory.) Conflicts are acknowledged only as temporary and as reflective of superficial differences which can be easily resolved. The positive forces of open conflict are subjugated to a false and misleading belief that there is agreement about basic sex role norms and values and a general trust in the system. The consensus model maintains that all individuals have "appropriate" access to resources and to rewards in the educational system, and later in the society. Clearly, "appropriate" access in a system based on a fundamental belief in the status quo, in which traditional sex roles prevail, is not the same thing as equal or non-discriminatory access; thereby, our educational system continues traditional sex discrimination.

The conflict model. In adopting a conflict model of organizations, we acknowledge that sex roles are not universally agreed upon and are currently very much in contest. Overall basic educational values and trust that the system functions in the best interests of all members are no longer commonly held; in fact, it is doubtful that they ever were. In order to help eliminate sex

discrimination, decisions must be arrived at by the interaction among the different groups of members who have various goals and purposes which are usually not even reciprocal with those of other organizational classes. In the conflict model the fact that access to resources and rewards are traditionally based on sex role (and other) constraints is recognized; conformity to the traditional status quo can be abandoned, necessitating the reconsideration of the deliberate and the latent aspects of the educational system which promote sex discrimination. Positive conflict is accepted as a means by which to arrive at more flexible and adaptive definitions of human roles in education and in society and of training individuals to occupy those roles. This is especially important as societal roles are less and less identified with the arbitrary and artificial aspects of the traditional division of the sexes. A recognition of the arbitrariness of that division in today's automated society is critical since schools still reflect and maintain sexism as they function to track and to train individuals according to the historical division in which women's only "real" role is that of mother and wife. This channelling process legitimates the later allocation and distribution of roles and vice versa. Without adopting a conflict model, it is impossible seriously to attack the circular process of sex discrimination in education.

By recognizing conflict as an inevitable and potentially positive force we can begin to make recommendations for a reevaluation of the status quo and for possible directions and methods for change in the process of sex discrimination in education. For example, overt, open-ended conflict can lead to the adaptive interaction of individual needs, goals, and desires with institutional and societal needs, goals, and future structures. Additionally, within the individual and within the institution, open recognition of ongoing conflict necessitated by development and by changing external requirements, resources, demands, etc., can produce new directions and impetus for growth and change. Institutions and individuals interact and various societal institutions (e.g., the political, economic and educational institutions) themselves interact and mutually influence each other. For limited purposes a specific system such as education can be analyzed independently, but must be understood to exist in the larger context. The conflicts generated within the institution and between the particular institution and external agencies can identify the critical intervention points necessary for ending sex discrimination. They can also provide insights into the characteristics necessary for producing a sex-role-transcending educational system.

Obviously, large scale societal and educational changes regarding sex discrimination presuppose changes in many facets of the interlocking pattern of individual and institutional dynamics. Elucidating and implementing particular programs for change must take both into account since institutional parameters such as roles, norms, and structures mutually interact with and influence individual attitudes, beliefs, behaviors, goals, etc., in the process which fills institutional roles with appropriately socialized and trained individuals.

Both individual development and institutional functioning are the result of dialectical interplay between the factors which make up the individual and the institution. Moving away from a state of hyperpolarized sex roles in institutions requires an awareness of the part various conceptual factors play as they interact and mutually influence each other. Further, for individuals to transcend traditional sex roles requires institutions able to support and to accommodate such individuals; creating transcending institutions requires individuals able to fill institutional roles produced in that kind of change. One cannot be fully considered without the other.

V. SEX ROLE TRANSCENDENCE AND INTERVENTION IN THE EDUCATIONAL SYSTEM

A program designed to test the model of sex role transcendence requires, in the broadest terms, the acceptance of the potential existence of a stage of sex role development (and supportive institutional structures) in which gender is an irrelevant dimension for individuals (and for roles). The underlying assumptions of our model and thus, of a change program within which to test it, are: (1) that ongoing conflict is inevitable and can be a positive force, producing continuing individual and institutional change; (2) that emergent pluralism is a desireable goal for individuals and institutions; and (3) thus, that there are multiple possible and acceptable outcomes of socialization and education and not singly a dual system with a simple possible individual outcome, i.e., the traditional and the equal status models of masculinity and femininity; or a single system with one outcome for everyone, i.e., the homogeneous model. Thus, the test of our model and the change program we propose are founded on a dialectical conflict model of development which rejects the goal of either a maintenance of polarities between, or a homogenization of, the sexes. Instead, it focuses on striving toward pluralism as it can emerge in a society in which biological sex need not determine life-long sex roles in all their non-biological manifestations.

Our working hypothesis is that change away from the hyperpolarized, stereotyped conceptions of traditional sex roles, characteristic of Stage IIB individuals and institutions, will eliminate sex discrimination if replaced by the gender-irrelevant, emergent pluralist and dialectical conflict orientations toward human roles characteristic of Stage III. In the earlier phases of this project, we have repeatedly emphasized the pervasive and circular nature of sex discrimination in modern-day America. Attempting to intervene in a basic dynamic such as sex discrimination, which originates in the asymmetrical valuation and rigid polarization of women and men, requires a long-term perspective which sees change as an ongoing process and which conceives of the problem as involving a multitude of interacting factors. We believe that the test of our model and the change program we describe contain the potential to create and to maintain a process necessary to alleviate sex discrimination in education and eventually to eliminate it entirely. It is not a model which simply blames and tries to change the victim. It is one which proposes to attack the <u>various</u> intra/interpersonal and institutional causes of sex discrimination. The test of our model is premised on the development of change programs from within the educational institution, not imposed on the educational system by external agencies and means. The program we have designed within which we empirically test the model of sex role transcendence as a means of eliminating sex discrimination uses as conceptual frameworks the four planes of individual development (inner-biological; outer-physical; individual-psychological; cultural-sociological); the seven parameters of organizational structure conceived within a conflict model of schools (goals; membership patterns; norms; patterns of social interaction; power structure; technology; boundary maintenance) and the six constituencies of schools (administrators; teachers; non-academic staff; students; parents; community).

This change program shares many of the goals and techniques of other programs designed to intervene in the process of sex discrimination. For only two examples (out of many possible), we also believe there is a need to redress the imbalance in the funding of education programs for women and men (e.g., in athletics) and a need to discontinue arbitrary tracking of students based on their sex. We see these, and many of the other possible examples from other intervention strategies, as necessary parts of any--and thus of our--change program. But these are not sufficient conditions of change. These efforts are an integral <u>part</u> of what our program must attempt to do in order to fully test our model and thus, are subsumed by our program. We propose to include affirmative action goals as well as many of the goals of the assimilationist

model (e.g., training women in traditionally masculine skills, roles, etc.) and of the melting-pot model (e.g., training men in traditionally feminine skills, roles, etc.). Nonetheless, we must reiterate that the goals of these other and more concrete change programs by themselves will produce limited and probably only short-term changes. In some instances superficial changes in one area may even mask a strengthening of sex discrimination in the system as a whole. We should heed the findings of Coleman (1966, 1968) which indicate that equal input in terms of dollars, equipment and so on does not necessarily affect the outcome measures. This does not mean that one should not bother to equalize input, but rather that only with a consideration of what happens at the other end (output) can one effectively institute and evaluate change. For example, only with a working relationship and communication of high schools with institutions of higher education or employers can change programs guarantee to the constituents (in this case, students) the realization of their efforts. High school students engaged in the elimination of sex discrimination at that level must have avenues after graduation in which to pursue these efforts and utilize the changes they have experienced. Thus, it can be seen that our program attempts to place other change efforts into a larger context, specifically in a plan based on the dialectical model of sex role transcendence.

We propose a progressive sequence of sex role development which makes these change efforts a part of a long-term, broadly based program. We believe this can produce genuine individual and system-wide changes. The unique ways this program will produce such changes in the process of sex discrimination and allow for a test of our model largely depend on the assumption that Stage IIB is a temporary stage which can and should be followed by and thus modified in Stage IIC and ultimately transcended in Stage III. Therefore, change efforts and the test of the model will always implicitly or explicitly be concerned with measuring movement toward Stage III. The awareness of the existence of and an understanding of the characteristics of multiple stages and parameters of individual development and institutional structure will provide the framework within which this test of our model will be relevant to the individuals and institutions with which they are working. This will be done with regard to where the individuals and institutions are currently situated and which stage they can most easily and effectively be helped to achieve next. For example, one test strategy may focus on moving Stage IIA girls into Stage IIB only with regard to an understanding of their biological reproductive role and its <u>necessary</u> psychological and behavioral concomitants. (In saying "necessary"

we stress the very limited nature of such concomitants, perhaps affecting a few days in the entire life, as contrasted with traditional assumptions of pervasive and life-long concomitants.) Another strategy may focus on helping institutions redefine organizational roles from a Stage IIB emphasis to one which combines traditional masculine and feminine role behaviors, i.e., to a Stage IIC definition of the appropriate role behaviors. The amount and kind of change in sex discrimination produced by these strategies, then, will indicate the adequacy of our model.

Because the test of our model is based on a conflict orientation, it can and must also be responsive to the particular conflicts and issues relevant to the individuals and institutions with which it is working. As mentioned above, this includes the specific stage in which the target individuals and institutions are functioning. However, this is just one form of responsiveness necessary. The test and change program includes the necessity to be responsive to the different characteristics of those individuals and institutions on such variables as race, class, educational level, geographic location, religion, etc. Different conflicts will produce desired changes in different individuals and institutions depending on the particular issues which create the conflicts. Therefore, the form of the test of our model will be extremely sensitive to the content and meaning of the conflicts aroused because of particular and/or unique characteristics of different individuals and institutions.

Since growth and change in our model are seen as continuous and conflict-induced, testing the model necessitates change techniques which create new conflicts and/or which highlight existing conflicts in the area of sex roles. The test of the model of sex role transcendence based on the idea that there is no necessary endpoint to development, since new conflicts will always be naturally occurring and producing change, means that such a change program can become an ongoing aspect of the educational institution. It can then both monitor the alleviation of sex discrimination as we know it and continue to create and highlight as yet unknown conflicts which can lead to further change and the eventual elimination of sex discrimination in education.

Nonetheless, the total elimination of sex discrimination according to the model of sex role transcendence must await a time when sex roles have been transcended and no longer have any substantive content or relevance for individuals and institutions. The alleviation of sex discrimination, however, can begin immediately with the movement toward a Stage IIC in which individuals and institutions can more freely choose feminine or masculine characteristics and role definitions and are not as constrained as they are in Stage IIB.

This Stage IIC, in addition, is one which is profoundly influenced by the potential existence of Stage III and the multiple outcomes and emergent pluralism of that "final" open-ended stage.

VI. SEVEN PARAMETERS OF EDUCATIONAL ORGANIZATIONS

In the following discussion, each of seven major organizational parameters are described in general; then, how the different factors are causative of and relevant to the process of sex discrimination and sex role transcendence is discussed. The purpose in presenting the following information is not to describe fully the existing evidence of sex discrimination but rather to set out the general kinds of indicators relevant to each category. Certainly, organizations differ from each other and there are also other ways to conceptualize the structure and functioning of organizations. Nonetheless, we feel that this seven-part framework clarifies the basic facets in a useful way, and is one which highlights the conflict model of organizations (see Table 1).

The seven aspects of organizations are: (1) goals; (2) membership patterns; (3) norms; (4) patterns of social interaction; (5) power structure; (6) technology; and (7) boundary maintenance. These seven parameters are not always conceptually or practically distinct; they continually mutually interact and influence each other. However, each also has a unique role in the structure of the organization. The ordering of these aspects here is not intended to reflect a hierarchical ranking. Obviously, some exert more influence than others under certain conditions although none alone is a sufficient explanatory variable which can account for a complex dynamic such as sex discrimination.

Goals. The goals of an organization refer to the major purposes, manifest and latent, that an organization has for existing. Organizations are goal directed entities and goal attainment is thus necessarily a priority; it is often the highest priority. As stated earlier, one primary goal of an organization is the preservation of its own existing status quo and internal order, whatever the original reason for the organization's creation might have been and regardless of the other goals of the organization. The goals are expressed in the ideology, the policies and the programs of the organization. Thus, there can be situations in which manifest goals of an organization contradict the latent goals; the general although often misleading assumption is that there is a great deal of agreement between the manifest and latent levels of organizational goals.

The major indicator of sex discrimination in this aspect is the extent to which the institution's goals for women are traditional goals or are androgynous and transcendent goals. Thus, the fact that a limited number of roles is believed to be available to women (and all other roles are proscribed) and that there is explicit or implicit valuation of roles with regard to sex of the role occupant indicates sex discrimination. In education, the preparation of women to occupy various roles and the discouragement of women from limiting themselves is an indicator of the absence of sex discrimination. Any acceptance of goals which either limit women according to traditional sex roles or which place higher priority on educating men for public roles and discourage men from domestic roles constitutes sex discrimination. Not only does our perspective posit that women's multiple goals are important, but the approach we take--at the least--allows for an equal valuation of women's and men's goals if and where they differ, and goes further by accepting the potential for an entirely new and transcendent conception of human roles to emerge in which gender is irrelevant to goals.

The policies and programs of the educational institution depict the ideology and goals and must be analyzed for the above assumptions and possible priorities. Clearly, the traditional assumptions of sex roles are still very much a part of the goals of education in the United States (e.g., Stacey, et. al., 1974), even though the ideal of education in an allegedly pluralistic society is often believed to underlie "equal opportunity" in the schooling of females and males in this country. In looking for these indicators of sex discrimination, care must be taken to note those cases in which the actual operational policies of educational systems subvert, overwhelm or ignore the formally articulated non-sex-discriminatory goals (for example in a formal statement in response to Title IX of the Education Amendments, 1972). Even when the explicit organizational goals do not appear to discriminate on the basis of sex, the everyday functioning of schools can create and perpetuate the traditional roles of women and men, among students and among staff, thereby continuing sex discrimination. The degree of inclusion and implementation of affirmative action programs in the goals and policies of education can be both an indication of the current state of education with regard to sex discrimination and an indication of the amount of change still necessary to eliminate it in our schools.

If a long range perspective is accepted, the goals of education should be analyzed for the inherent or built in degree of flexibility. The major question is: can the goals change as individual and societal needs change? When current indicators of sex discrimination reveal that it has apparently been

alleviated this is no guarantee that future indicators will not find it manifested in the goals of the institution in new, and possibly in as yet inconceivable, ways. Without the ability to analyze the degree of flexibility and responsiveness of goals and programs, the indicators of sex discrimination developed at this point in the understanding of that process are limited to a particular conception of sex discrimination and its absence, relevant today but perhaps not as useful in the future.

The goals of educational organizations are heavily influenced by the particular economic environment of our society, i.e., capitalism. One result of this is that goals of order and efficiency, as contrasted with goals of community and equality, are among the most important in schools, in terms of effects of school inputs and outputs on the rest of society. Therefore, the equity based claims for changing patterns of sex discrimination (see, for example, the wording of the Title IX of the Education Amendments of 1972) are clearly a source of conflict with the status quo. It is abundantly clear that programs for ending sex discrimination are meeting with resistance from the (white, male) establishment and that this is more than merely an effort at preserving male privilege, it is also preserving fundamental concepts of order and efficiency thought to be prerequisites of the capitalist system. The mere promulgation of regulations will not produce desired change in such a situation—in fact, it often stiffens resistance. Changes in attitudes and prejudices of individuals, as well as institutional changes are required. For these reasons, among others, many people expect decades of conflict over sex discrimination issues in schools, in analogy with long-term conflicts over racial discrimination of schools.

One implication of sex role transcendence for goals is that schools must move in the direction of more humanistic concerns. Pluralism requires that subparts of the organization must have the delegated power to establish their own goals, thus opening the way for a variety of life-styles and of definitions of roles, not organized along present, rigid concepts of traditional sex roles.

Membership patterns. The second property of organizations is the pattern of member inclusion. This includes demographic variables, skills of members, whether membership is voluntary or not, and the different possible levels of membership, ranging from marginal membership to full admittance. Thus, this factor includes not only who the members are and what attributes they possess,

but also how they become members. There is overlap between this aspect and that of boundary maintenance, which includes the criteria used for membership.

Indicators of sex discrimination in many of the membership patterns of education, unlike the category relating to the goals, are often very different for students than for other school personnel, especially when the setting is pre-college. This follows from the policy of mandatory educational attendance in this country between the ages of five and sixteen and the "free" nature of publicly supported education through high school graduation (about age eighteen). Thus, the pattern of original entry at age five into the private and public educational systems should and usually does reflect the demographic variation of the population at large; therefore, systematic sex discrimination among students at the level of admission is not a significant indicator of sex discrimination. For teachers and administrators, however, criteria for entry into the system can indicate a great deal of discrimination on the basis of sex. It is necessary to look at many comparisons to obtain a good indication of the presence of sex discrimination at the point of entry, perhaps beginning at a broad and general one such as:

$$\frac{\#\text{ of women teachers/administrators}}{\#\text{ of women in the population}} \text{ vs. } \frac{\#\text{ of men teachers/administrators}}{\#\text{ of men in the population}}.$$

This kind of general comparison, though, is clearly far too limited; much finer analyses have been seen to be necessary to uncover the process of sex discrimination in education. Just a few examples of the direction a more detailed statistical analysis would take are:

$$\frac{\#\text{ of women hired as teachers}}{\#\text{ of women minimally qualified}} \text{ vs. } \frac{\#\text{ of men hired as teachers}}{\#\text{ of men minimally qualified}}$$

$$\frac{\#\text{ of women hired}}{\#\text{ of women who apply}} \text{ vs. } \frac{\#\text{ of men hired}}{\#\text{ of men who apply}}$$

$$\frac{\#\text{ of women who apply}}{\#\text{ of women minimally qualified}} \text{ vs. } \frac{\#\text{ of men who apply}}{\#\text{ of men minimally qualified}}$$

We acknowledge that such phrases as "minimally qualified" represent issues that themselves must be analyzed for the presence of sex discrimination and that the definitions of those terms are frequently in contest. Nonetheless, the whole range of possible comparisons between the number of women hired and the corresponding number of men hired must be explored. Also, the reasons behind a finding which displays differential percentages of women and men hired (e.g., <u>why</u> a higher percentage of men are hired who are minimally qualified for administrative posts) can begin to uncover the process of sex discrimination as well as the evidence that it exists.

Within the educational system, once initial entry has been made, the relative numbers of females and males at each job level, for school personnel, or of females and males in each tracking line, for students, indicates the degree of sex discrimination. More detailed analysis for this phenomenon is also possible and necessary; for example, comparing females who would like to move into a certain position but who do not apply. Between educational institutions, if they differ in quality and/or prestige (this is especially relevant for higher education), a comparison of the numbers of women and men at different levels within each can reveal sex discrimination. Correspondingly, the credentials necessary for admittance to membership in the educational structure of schools for all staff, and for students in any specialized programs, may be different depending on the sex of the applicant. For instance, in obtaining entry to a traditionally male technical education program, a female may have to have a higher score on an entrance examination than is required for the males. Or to get a job a female teacher might need to have a degree for a more prestigious university or more experience than would a male applying for the same job.

Sex discrimination can be indicated in the full time or part time status awarded to or required of individuals in a certain job, depending on sex. A formulation of this situation in its simplest form is:

$$\frac{\#\text{ of women part time}}{\#\text{ of women full time}} \text{ vs. } \frac{\#\text{ of men part time}}{\#\text{ of men full time}} .$$

Again, this kind of formulation misses many aspects of the process of sex discrimination and further analytical and statistical comparisons can help enlarge the understanding of this phenomenon, such as:

$$\frac{\#\text{ of women working part time}}{\#\text{ of women desiring full time}} \text{ vs. } \frac{\#\text{ of men working part time}}{\#\text{ of men desiring full time}} .$$

The corollary of this comparison is to find out the number of women desiring part time jobs who are forced to take full time positions to get a position at all or to get any of the benefits (e.g., health insurance) of the position. Once more, the reasons for women being in part time positions when they desire full time work (and vice versa) will depict the workings of more subtle forms of sex discrimination. This dynamic is clearest in higher education, for both students and faculty, where the choice and possibilities for part time positions often exist. It may also be operative at lower levels of education in such situations as the comparison of the number of women desiring additional jobs (e.g., teaching summer school; coaching for pay) who are offered those versus

the number of men wanting and offered such opportunities to earn extra income and/or opportunities for advancement.

One requirement of sex role transcendence is the openness of all levels of the organization to both women and men. As stated above, however, the mere assimilation of women into hierarchies that continue a male/masculine pattern of dominance is not sufficient. What we envision is women's and men's participation to reflect variety, accountability, representative (as opposed to expert) power, etc.

In the context of admission's requirements, for instance, Dawes (1964) has presented a detailed mathematical analysis of why a pluralistic conception of what success is leads to admitting people who are considerably more advanced on each of several characteristics, instead of people who are only moderately competent at everything. This requires a disjunctive use of selection criteria; someone is admitted who is outstanding on any <u>one</u> variable. In applying this to the admission of women to educational organizations, we could also expand criteria to include specifically female/feminine categories of experience. For example, one way of demonstrating suitability for a developmental psychology graduate program might be successfully socializing a child to age five.

<u>Norms</u>. Organizational norms encompasses the value system and reward structure of the organization. This is related to the first parameter, goals, in that norms of an organization in some way usually reflect and are reflected in the purposes. The normative system governing the organization and the nature of the rewards which obtain to the members are in large measure derived from the larger societal context. The cultural values, norms and expectations mainly determine the more specific organizational norms and the differentiation of criteria for rewards as well as the patterns of allocation of those rewards. Norms can be explicit and/or implicit; like latent and manifest goals the two strata of norms may not always be congruent and may not even be complementary.

This is a category on which students and staff can be differentiated. For school personnel, the comparison of female and male salaries in terms of the mean, median, mode and range is one obvious, and well documented, indicator of sex discrimination. For students, a comparable indicator is only clearly evident in higher education, e.g., the amount of financial aid differentially available to individuals on the basis of sex. For both staff and students, the amount and kinds of promotions, evaluations and entrees to better positions can reflect sex discrimination, subtly and explicitly. Also, the degree of freedom to choose a particular course of study or specialization (e.g.,

learning or teaching traditionally feminine subjects or those related specifically to women) and still obtain academic and occupational rewards equal to those given in other areas may indicate sex discrimination.

It is clear that many reward systems have been set up in such a way that typical masculine activities are rewarded, while feminine ones are not. This situation is illustrated by the fact that university professors who are nurturant towards students (counselling, giving detailed critiques of student work, etc.) are not usually rewarded with promotions and raises for such activities. A pluralistic conception of norms could reward a variety of activities that are functional for the organization, resulting in advancement for differentiated styles of performance.

A comparable example at the junior high school level might be reduction of one course from the teaching load of any teacher who volunteers to counsel a specific number of students, thus formally rewarding what is a largely unrewarded, and feminine, role. In both of these cases, we are not proposing these activities as necessarily "feminine" ones since the evidence indicates men have made more differentiated responses to reward patterns in the past. Thus, men might continue to do so, and adopt a more androgynous pattern of behavior on the basis of the new reward system.

Patterns of Social Interaction. Within the organization, communications, influence and status networks describe the category labelled patterns of social interaction. This refers to the informal structure of communications, the amount of member autonomy allowed or accepted and the informal system of role definition and criteria for successful role functioning and fulfillment. The supervisory apparatus of the organization, especially in its social, interpersonal function, belongs to this parameter. The pattern in terms of the amount and kind of interindividual interaction within and across classes of members and the intergroup social interaction can limit or facilitate an accurate understanding of the differences or similarities between the formal and the informal structures of the organization. Since power and influence are not always synonomous, informal patterns of social interaction and influence may circumvent, supersede or cut across formal patterns of power.

Interaction is an area in which there are clearly defined feminine patterns to contrast with masculine ones. One clearcut difference is in the emphasis on cooperative styles: acceptance, support, appreciation, respect and mutual assistance as opposed to competition, individualism, winner-take-all and other masculine styles.

The pattern of social interaction within the educational system is a particularly complex issue. Due to the mainly informal nature of social interactions, it is an organizational variable difficult to concretize or measure. We have identified several variables within this complex area which may indicate sex discrimination when compared according to the sex composition of the interaction among and between the organizational divisions of schools. The amount, kind and quality of social interaction of students with faculty according to sex, are kinds of interactions which demonstrate one interface between the levels of organizational structure and may be particularly indicative of sex discrimination in the system. These factors are such things as friendship (e.g., the necessity for a male mentor for male and female students) and the organization of "extra-curricular" activities (including athletics) and social interactions outside the classroom. The sense of belongingness in the system and the respect and appropriate treatment accorded to those within a particular role category and as a human being regardless of role status are two other patterns which can indicate the presence of sex discrimination. Additionally, the makeup of informal lines of information dissemination and of communication, the feedback and supervisory network and the amount of influence in the system and the availability of role models for both current and future roles are important factors to consider.

Transcending organizations would have communication patterns organized in a variety of ways, some of them cross-cutting typical vertical or horizontal patterns of strictly functionally-oriented settings. For example, a women's caucus at a school might include department chairwomen, teachers, secretaries, janitresses, busdrivers, students and parents. Other interest groups could perform similar cross-cutting communication functions.

Each of the variables relevant to this category can be described in great detail. Since our purpose is simply to frame the general kinds of indicators representative of the seven parameters of organizations, rather than to present an exhaustive discussion of any single set of indicators, we have chosen one to illustrate its potential for revealing the process of sex discrimination. The supervision of teachers and students may differ between the sexes, in such things as amount of supervision given or autonomy allowed; the type and timing of feedback; the number of individuals to whom a supervisee is directly and indirectly responsible, etc. Females may be followed more closely or less closely than men in similar positions. The discriminatory nature of the supervision style depends in large part on the reason for this differentiation if it exists. For

example, if the supervision is intended to encourage and direct the individual in a way that helps promote or determine success in the system, its absence for women will be evidence of sex discrimination. If the supervision is used to patronize, control or keep down the individual, the behavior on the part of the supervisors may superficially appear similar to the helping kind of interaction; but in this case, because the attitudes and intentions are different, the presence of close supervision is an indicator of sex discrimination.

Since the above example depicts the critical difference of an indicator depending on the meaning--to the individual and to the institution--of the situation, this is a good place to discuss this issue in more depth. The concrete presence or absence of an indicator cannot determine by itself whether the dynamic under scrutiny is really indicative of sex discrimination without a fairly sophisticated understanding of the function and meaning of that indicator. Some simple indicators exist which need little interpretation, although even those present some definitional problems. In general, though, an overall picture of the situation which is being studied is necessary to determine not only the interactive role of a single factor with other factors but also the possibility that what looks like sex discrimination on the surface may not be. Thus, as we have emphasized, much effort must be expended in determining the subtle influences which create and perpetuate sex discrimination. Another issue is that what is an indicator of sex discrimination at one time under one condition may not be discriminatory at another time under different circumstances. It is very important that analyses of schools strive to achieve as sophisticated conceptual and methodological measures as possible.

Power Structure. This organizational parameter refers to the formal authority structure of the organization in contrast to the more informal nature of the preceding aspect. This system for decision making can be narrowly or broadly defined, determining who decides what and how and when those decisions are made. This apparatus is usually assumed to be clearly and precisely delineated in a particular organization; depending on the size and complexity of the organization, though, power can be arranged in various ways which can be more or less clearly articulated. There may be a hierarchical authority structure in which ultimate veto power for all decisions rests with a single individual or group "at the top." Or authority to make decisions can be horizontally patterned so that different individuals or groups decide different issues with varying degrees of autonomy. Power can be arbitrarily assumed by authority but designed so as to be seen as the result of trust placed in those authorities or it can be

obtained through negotiation and conflict among the (classes of) members. (See discussion of conflict versus consensus models.) Overlap in the domains of power and/or an ambiguous authority structure can lead to confusion or contradiction in decisions. In a simplistic conception of power, it is seen as synonomous with influence. Influence more correctly belongs to patterns of social interaction, making it part of the informal network of the organization. Power, then, can be understood to be the result of the formal assumption of decision making in the system. The power apparatus can, in fact, simply be a reflection or legitimation of the lines of influence; it may also serve to obscure the way in which organizational decisions are really made. That is, power may determine influence or vice versa. Power may directly or indirectly be responsible for the informal structure of the organization, whether or not that informal system is parallel with or reflective of the formal system.

Like the pattern of norms and rewards and certain aspects of the patterns of membership, when investigating the power structure of education, the number of women in positions of authority compared to the number of men is only a starting place. Other formulations such as those below, and the reasons for the sex differential if it is uncovered must also be used if the complexity of the situation and the ways to intervene in it are to be comprehended adequately. For example, some statistical tests might be:

$$\frac{\#\text{ of women in power}}{\#\text{ of women qualified}} \quad \text{vs.} \quad \frac{\#\text{ of men in power}}{\#\text{ of men qualified}}$$

$$\frac{\#\text{ of women who apply}}{\#\text{ of women qualified}} \quad \text{vs.} \quad \frac{\#\text{ of men who apply}}{\#\text{ of men qualified}}$$

$$\frac{\#\text{ of women who apply}}{\#\text{ of women desiring job}} \quad \text{vs.} \quad \frac{\#\text{ of men who apply}}{\#\text{ of men desiring job}}$$

and so on.

The numbers of women at different levels of decision-making responsibility and the impact and influence they can wield within the authority structure can indicate sex discrimination. As an earlier example illustrated, sex discrimination is indicated when women are admitted to low levels in the power structure but are not able to fill those positions as well as men due to other influences and pressures built into the system. It is also present when women are kept from moving up in the hierarchy of power to positions of greater control and responsibility. What decisions women are allowed to make can expose sex discrimination, e.g., they may be lower priority ones and/or decisions only relevant to women, etc.

The role of students in general in the power structure of education is limited by the consensus model of education on which the United States' educational system is based. But male students may be included more often than female students on decision making bodies which have power in the system as a whole. Inclusion can be direct when students are appointed to a governing board; more often, student power positions are obtained within the students' segment of the educational process which then leads to direct and indirect power in the overall system. One example is the election of a student as "student body president" which then may entitle that student to sit on certain faculty-student committees. All of these possible arenas must be analyzed to determine if power positions are more often filled by males than by females. As illustrated in several other cases, this analysis must involve comparing the numbers of women and of men who want and seek authority positions as well as those who actually get them. If a numerical difference between the sexes exists, why this is so is a question which must be answered in order to move the analysis as close to its beginning points as possible. Dismissing the fact that only two males ran for a position like president of the student government council, which accounts for a male being elected and "no sex discrimination is involved because a female could have run but none chose to," misses the functioning of the process of sex discrimination which began long before the actual choice to run was made. This demonstrates the interactive nature of the process, bringing in the critical influence of other parameters (e.g., norms) to explain why sex discrimination exists and continues.

Technology. In order to achieve the goals of the organization, a means to those ends is necessary. The term technology, too often only associated with the mechanical or scientific machinery of an organization, can refer also to the human or social organization of tasks within the organization. This category includes the division of labor assumed to be necessary for the accomplishment of the implicit and explicit goals. Thus, both the material and the human means of the organization count as technology in this analytical frame work. Technology is usually a reflection of the power structure since it is the authorities who decide how goals/tasks will be approached and completed. Goods, whether they are material or social products, are produced with varying degrees of efficiency depending on the technological organization of resources. The nature of the work within an organization is closely related to the structure of the technology adopted by that organization.

Under the rubric technology, the major component in education is the form and content of the information and training offered and the structural constraints

on teaching, i.e., curriculum requirements. Sex discrimination may be indicated here by the kind and amount of training differentially available to and obtained by women and men. It is also revealed in the role and responsibility of women in developing and maintaining the technological resources of education and how much of the content of education reflects women's issues and women's needs. Thus, arbitrary tracking of students based on sex is an indication of discrimination but so is the limitation or absence of women's input into the content of education and the "legitimate" areas for curricula development.

Friere (1971) has pointed out how failures to learn often represent direct or indirect attempts to control a person's life through the educational process. He is able to produce dramatic changes in the ability of peasants to read by changing the power relationships and the meaning attached to the reading process. It seems quite conceivable that there are parallels in the situation of women and their difficulties with certain school subjects. In the area of mathematics, for example, it has been demonstrated that changing even rather superficial aspects of the situation, like changing story problems' content from masculine, traditional ones to the domain of cooking and sewing, dramatically changes the relative performances of boys and girls.

Affective learning is another catch phrase for a program of changing the predominant emphasis in education from competititve, achievement orientations to more cooperative ones, concerned with the sense of community, the nurturance provided to the participants and a cooperative atmosphere. It has also been suggested that our move into a post-industrial, service-oriented society requires more emphasis on these traditionally feminine aspects of behavior, stressing getting along with fellow human beings more than stressing only production, order and efficiency.

Boundary Maintenance. The last property of organizations is boundary maintenance. The degree of permeability of the boundaries which differentiate one societal organization from all others can result in a closed, tightly defined entity or an open, easily entered and exitted organization. This facet of organizations is especially relevant to the criteria for membership. The input and output of raw materials (again, these can be material or human resources) belong to this category. This defines the amount and kind of interaction the organization has with external organizations and thus, can reflect the amount and kind of influence exerted among organizations. Who and what is brought into the organization and who and what is put out as "finished products" depends on the purposes and functions of the organization. The resources originally available to the organization and how the ultimate products

will be used are influenced by and affect all the other structures of the organization.

As reiterated often in this discussion, the seven different categories interact with and continuously influence each other. This mutual interaction is perhaps most obvious in the parameter concerned with boundary maintenance. Two major aspects of this category are: entrance criteria (closely related to membership patterns) and outplacement (the placement of the end result of the various institutional processes involved in creating a "finished product"). In education, the entry of teachers and administrators into the system and the exit of students from that system into the economic sector of society have a lot in common. For both, sex discrimination may be indicated by the information about jobs differentially available to women and to men; the amount and type of recruiting, counselling and encouraging given women versus that given men; the quality and kind of training available to and obtained by women before entering and during tenure in the educational system; the differential importance and interpretation placed on the marital and parental status of women, etc.

Education is a very open organization. Many community groups conceive of themselves as having rights in the school setting and means of access to exercise those rights are available. Earlier, in discussing goals, it is pointed out that there is a conflict between traditional goals of order and efficiency and those goals such as equity and democracy which underlie many of the challenges to sex discrimination. In terms of the open boundaries of schools, this translates into a question of which community groups can get their voices heard in educational policy making.

On the input side of schools, nearly every level of education insists that sex role stereotypes, discriminatory and hyperpolarized attitudes and so on are already present when the students come to them. That this is not necessarily the same thing as disclaiming responsibility for the problem can be seen by looking at the analogy of early learning problems. At least in some cases (e.g., the Brookline Early Education Project, Brookline, Mass.) the schools have taken the position that it is both their right and their responsibility to concern themselves with how parents, media and community are socializing children from birth to five years of age because future success in the educational system is crucially affected by what goes on during that "pre-school" period. In a similar vein, an engineering school that found women students unprepared in math might choose to deal with the problem by direct intervention into high school and even earlier mathematics teaching, counselling and teacher

training.

Many similar examples exist on the output side of the educational boundary. Many career training programs have been narrowly sex role stereotyped on the ground that the job structure ("beyond the schools' control") realistically required the practice. Again, there are analogies in the racial area in which schools refused to cooperate with placement programs for their graduates that remained segregated. Each of these examples requires that the educational system broaden its definition of its legitimate area of concern to include what happens to their students before they get to school and after they leave it.

Sex discrimination. With this seven-way analysis of organizations, sex discrimination may be seen as the result of some degree of arbitrary polarization and unequal valuation of the sexes within the organization in at least one and usually in more than one of the organizational parameters described above. Most likely, each parameter contributes in some way when sex discrimination is a pervasive organizational and societal dynamic. To determine the process of sex discrimination, indicators of sex discrimination must be sought in each parameter; the interaction of the various structures can then elucidate the ways in which sex discrimination is woven into the fabric of the organization. Furthermore, sex discrimination can be blamed on the needs and demands of one parameter when this interactive understanding is not accepted. That is, the organization can point to the need to meet the concrete demands of a single parameter (e.g., boundary maintenance, see example below) and in that way explain away or "excuse" the sex discrimination that permeates the organization.

One clear example of a single parameter being blamed for "causing" sex discrimination is the oft cited inability of even well trained women to be hired into male professions. The educational institution can then point to the demands of realistically understanding the maintenance of boundaries. What is said is that training female engineers, for example, is useless since the output of female engineers (the "finished products" of the process of education in this case) is a misuse--or worse, is a waste--of the organization's resources. The input of female human resources into engineer's training is not considered a good idea and is not done; thus, the circular process of sex discrimination is completed. By remaining so narrowly focused on the input-output aspect of the organization, the role of and the interaction between the other parameters, like norms which say that women whould not be engineers, can be underplayed or ignored.

Another example of the way in which one parameter "created" sex discrimination is much less obvious but still depicts the circular process of sex dis-

crimination as it is created in the interaction of parameters. This example also highlights how organizations can make formal (superficial) changes regarding women while continuing to insure that sex discrimination will pervasively exist. That is, women can be initially admitted to a low level of membership in the organization; the explicit and formal goals, norms, power structure and technology of the organization can be designed to legitimate their presence there. But the informal, implicit goals and the patterns of social interaction, especially the informal lines of influence and communication, are organized to exclude women in anything but formal and limited participation (e.g., Epstein, 1971). Thus, women's potential for equal status, power and influence are undercut; this makes women, at best, always marginal members of the organization. This situation usually occurs when the formal structures of the organization are inconsistent with the underlying implicit structures.

The above situation is illustrated by the sex based differential promotion of classroom teachers to administrative posts. Although the formal structure of the educational system is now designed and upheld by law to include women equally in consideration for administrative positions, the informal norms and patterns of social interaction remain traditionally oriented, i.e., administrators are male, in reality and in expectations. Male administrators and male teachers may be part of a cross-status, single-sex social network (the "old boy's club"). Thus, male teachers may be informally approached and sounded out for interest and ability to hold administrative jobs by current male administrators. Male teachers may also have more opportunities than women to display their interest in and ability for promotion in less threatening, informal and social settings.

A corollary of this circumstance is seen when a woman is actually given a formal administrative power post but is still denied access to informal influence and status, among her administrative peers and the teachers over whom she has formal authority. Formally and explicitly, such an administrator wields power; informally, she cannot run things as clearly and as directly as a male who is in the same formal position but who has all the informal supports and influence as well. Thus, the administrator may not be able to perform the job as successfully; the decision to hire women administrators is seen as a poor one; women are deemed inappropriate choices for future promotions and "proof" of this is now available to back up the contention; women are then passed over for future promotions. Once again, the circular process of sex discrimination is complete.

These few examples are intended to illustrate the interaction of the seven parameters of organizations in producing sex discrimination. They demonstrate the complexity of the influences these categories represent. The examples also depict how superficial changes, even when implemented in more than one category, cannot eliminate sex discrimination if a larger perspective is not taken. This is particularly the case when the other parameters are allowed or encouraged to increase their influence in the process creating and perpetuating discrimination, and thus offset or overwhelm the positive changes instituted in certain categories in the pursuit of eliminating sex discrimination.

If the institution of education is analytically approached with a conflict model of organizations using as a framework these seven parameters of organizations, each category and all of their possible interactions lead to an understanding of causes and of potential changes necessary to intervene in the circular process of sex discrimination in education. The complexity and interactions have been illustrated to emphasize the critical necessity of placing indicators of sex discrimination drawn from a single parameter into the larger context.

In education, the interactions among these parameters contributes to the pervasive sex discrimination observed there. There is sex discrimination at all levels of education, for women staff and for women students. Uncovering the different indicators of sex discrimination and then understanding the interaction among them is a necessary step in analyzing the process. Intervention and change, however, require an overview perspective of the mutually interacting nature of these indicators with other factors not specifically related to the organization of the educational establishment (e.g., individual and other societal issues). Further, although many variables are responsible for the pervasive nature of sex discrimination, a few, very influential ones may need to be isolated and attacked in a practical effort to combat sex discrimination. Nonetheless, the larger perspective must be retained so that as one indicator or even many such concrete indicators change, others do not increase their influence and thus offset the larger systemic changes. Of particular import and interest are the interactions between explicit and implicit, formal and informal, blatant and subtle indicators of sex discrimination. Measurement of concrete, obvious indicators is only one piece of evidence regarding the presence, degree and functioning of sex discrimination in education. Often, these measures can present only one picture of what is necessary to modify sex discrimination in education; analyses of subtle indicators of sex discrimination, although difficult, will become more important.

VII. TEST OF THE MODEL IN AN INTERVENTION SETTING

A. Methodological & Measurement Approaches

It is our premise that hyper-differentiated sex roles result in sex discrimination and the way to eliminate this discrimination and its effects is to educate society and individuals away from sex role polarization and toward sex role transcendence. The success of an intervention program and the validity of our model are inextricably intertwined. A program must be designed to remedy institutional practices of sex discrimination as well as to promote individual development towards transcendence. The program itself, then, would be designed to foster growth in the sex role domain and to produce changes in people's conceptions of sex roles. We are interested in measuring these processes in order to validate our model. We see the test of our model as integral to our general approach and orientation throughout the project, since we assume that development and especially sex role transcendence can proceed only within a context in which change is the focus. In this way, people are actively engaged in a process in which it is relevant and meaningful to respond to our conceptualization of sex role development.

No previous academic work has addressed the process of sex role change in a particular institutional setting. The measurement of psychological androgyny (Bem, 1974; Spence, 1974) has been mainly descriptive. We envision taking these measures as a starting point and feel that they are particularly useful in measuring Stage IIB and Stage IIC or androgyny. However, the measurement of Stage IIC from within our developmental context (and the measurement of Stage III) may require methods distinctly different. We need a tool which is flexible enough, for example, to see if Stage IIC (androgyny) is different with and without the knowledge of the potentiality of Stage III.

A parallel problem in the realm of applied intervention programs is the lack of a clear overall perspective which grasps the complexity of the issues. This lack of a theoretical grounding results in inadequate, piece-meal attempts at change without changing the basic fabric of the institution. We have discussed this problem at length earlier in this report.

Neither of these problems can be solved independently of the other. The validation of our model assumes a program of change; in our view, intervention must assume a theoretical perspective such as our model of sex role development. Several lines of thought can be brought to bear on the integration of these problems: organic education, attribution theory, and personal constructs.

The common thread that runs through these three approaches (organic education, attribution theory, personal constructs) is the emphasis on "common sense" or "naive" psychology, beginning with the constructions that the lay person puts on the world. The beginnings of attribution theory were based on "the point of view . . . that scientific psychology has a good deal to learn from common sense psychology" (Heider, 1958, p. 5). According to the person-perception literature (a sub-specialty of attribution theory), experience is composed of raw feelings, verbally described experiences, and scientific experience. Those people who are working in the field of personal constructs think of people as scientists who form hypotheses about the world which are then confirmed or disconfirmed through experience. Organic education takes as a point of departure the student's reality. Freire (1971) expresses this position, "We . . . must never provide the people with programs which have little or nothing to do with their own preoccupations, doubts, hopes, and fears . . . . It is not our role to speak to the people about our own view of the world, nor to attempt to impose that view on them, but rather to dialogue with the people about their view and ours" (p. 85). In all of these approaches the "subject" is primary; action (or intervention) is immediate to the "subject" (this word is not used with the meaning it conventionally has in psychological experiments) who forms implicit personality theories to account for these experiences, their own behavior and the behavior of others. Only through dialogue with these subjects then, can our model be validated. In this way, intervention and theory can be integrated.

These three lines of thought also offer measuring techniques consistent with our dialectical approach which can be used in the process of dialogue or intervention to test our model. Before moving on to these techniques, it is useful to clarify some terminology.

Kelley (1955) uses the term "personal construct" to depict the underlying basis from which a person construes the world and acts upon it. A constellatory construct determines how someone will be construed in different realms (e.g., if gender is constellatory much of a person's behavior will be seen in terms of her/his sex). A propositional construct has no further implications (e.g., if gender is propositional for a person it means that others will be seen as male or female, but that sex has no further connotations in other spheres of life). According to Kelley's choice corollary, "a person chooses for himself that alternative in a dichotomized construct through which he anticipates the greater possibility for extension and definition of his system" (p. 64).

In other words, a person construes the world in a particular way (e.g., role conflict between family and career may be particularly salient for a woman) and chooses the alternative which provides a better basis for defining herself in light of potential experiences. In our example of role conflict, then, there is "an increasing awareness among women that they will probably not spend their entire life in the role of wife and mother (and indeed need never devote full time to it), so that to focus exclusively on these roles may no longer be elaborative (i.e., there are many probably events that they will not help the person anticipate)" (Rytting, 1975, p. 6). The compelmentary processes of dilation (absorbing more, new information) and constriction (e.g., resisting new information) are used by the person to elaborate her/his system. Thus, the person is constantly developing through constriction and dilation, forming constructs which are constellatory or propositional, but which may change. The problem then, is to measure or assess these constructs and determine (e.g., in the case of sex roles) how they might be changed. But this change must begin from the individual's (or particular group's) point of departure (the link to organic education).

Saavedra (1976) has found these concepts useful in describing the presence or absence of "sexism" in children age 11 to 14 (presence of sexism implies gender is constellatory, absence implies that it is propositional). Saavedra's work exemplifies the critical links between personal construct theory and person perception theory and our work on sex role development. In the person perception literature, stereotypes are seen as an " . . . inevitable consequence of our needs as perceivers to make sense of the world" (Hastorf, Schneider, and Polefka, 1970). There is an active striving for consistency and continuity. By assessing personal constructs or implicit personality theories we would begin to see when and for whom this need for consistency results in sex role polarization. By assessing these constructs over time, we begin to get a feel for the process.

The basic method for the personal construct research is a free-response method described in detail by Rosenberg (1976). The subject lists characteristics which describe her/himself and she/he also describes other people in this way. Self description includes "me now," "me past," and me "ideal." The next step involves uncovering which constructs are relevant for the subject, usually by comparing and contrasting the subject-generated list of people. Kelley presented the subject with groups of three people and asked how two were alike, but different from the third. Rosenberg used a complicated method of assigning

values to the characteristics generated by the subject for each person on her/his list reflecting the degree of relevance of a particular characteristic for other people on the list. Various statistical strategies such as factor analysis and multi-dimensional scaling are then used to derive the constructs which are constellatory for the subject.

This method corrects some of the shortcomings of fixed-format designs and fulfills some of the requirements of developing measures consistent with our theoretical perspective. However, it is necessary to be able to assess a person's perception of situations in which her or his constructs are operative or inoperative. Our conception of sex role transcendence involves both situational and personal flexibility—in other words being able both to adapt to a situation and to adapt a situation to personal needs. If gender is constellatory for a person, does this vary across situations?

Pervin (1975) adopts a different strategy for understanding personality which is in terms of the pattern of stability and change, in feeling and behaviors, in relation to defined groups of situations. In particular he wants to find out about the dimensions people use to perceive and organize situaitons; about the person-situation interaction. Four subjects were asked to:

1. list situations in her/his current life,
2. describe each situation,
3. describe how she/he feels in each situation,
4. describe her/his behavior in each situation,
5. indicate applicability of each situation trait, feeling and behavior to each situation.

Pervin used factor analyses to establish the degree of stability and change in the life situations of these people. For example, individuals may differ in the behaviors on which they are stable or varying or in the kinds of situations in relation to which their behavior varies. This is different both from a simple personality trait determinism and from a simple situational determinant explanation of people.

Following the leads of Pervin, Rosenberg, and Saavedra, we would develop techniques which would measure both personal and situational flexibility without resorting to either trait stability or situational determinism as the sole conceptual basis for our method. This could be achieved through a combination of approaches: an expansion of the Bem Sex Role Inventory (BSRI) and Spence measures to include an assessment of implicit personality theories around the issue of sex roles; and the development of original techniques

based on the work of the above authors. This type of free-response technique which relies on subject generated categories permits maximum flexibility in addressing the particularistic and distinct needs of varying communities (e.g., variation in ethnic or racial background, geographic location, age, etc.). Having a mechanism built into the intervention program which allows for this flexibility is perhaps the only feasible way to develop and disseminate a model applicable to the diverse and pervasive nature of sex discrimination.

These measures would be used throughout the program as evaluation techniques. Change in the subject-generated situations and personal constructs by which gender becomes less constellatory would indicate the success of the intervention as well as personal growth toward sex role transcendence. Complete success would be indicated if neither trait stability nor situational determinism reflect gender constructs, and when both situational demands and personal needs determine how people view themselves, other people, and behavioral requirements.

Description of Measures

Three different types of measures are suggested to test the model and to evaluate intervention programs. These measures are designed: to assess where people are developmentally in terms of sex role orientation, to determine the nature of the difference between androgyny (Stage IIC) and sex role transcendence (Stage III), to determine in which situations a person's sex role constructs are operative or inoperative, and to assess the situational and personal variability in sex role orientation.

Bem Sex Role Inventory with Modifications. As mentioned earlier, the BSRI could be used as a starting point; it is a good measure of Stage IIB and Stage IIC (androgyny). As the first step, this measure would be administered according to the instructions indicated by Bem (1974). However, this gives no indication of how people vary according to different situations, what the nature and timing of this variation is, and whether this variation is situationally appropriate. For example, an androgynous person as defined by the BSRI can either be very masculine in one setting and very feminine in another or be masculine and feminine in a variety of settings. Nor does the measure assess the sex role salience of the characteristics for a person (i.e., whether or not the "feminine" and "masculine" terms have sex role connotations for that particular person). A measure of salience would be

needed to determine whether sex role constructs are constellatory or propositional for a person (which is important in differentiating androgyny and transcendence). Two modifications of the BSRI can be suggested to solve these problems. First, the person can be asked to go through the list of words indicating which characteristics are related for them to "femininity" and "masculinity" or to biological sex (and to what degree). It would be important also to have the person indicate what they think the general societal norms are regarding each characteristic. By this procedure, one would be able to differentiate between two people who both score androgynous, but who may be very different on the dimension of saliency (low salience indicating movement toward transcendence). The second modification would be to include a version of the Pervin (1975) measure. This would involve having the person generate her/his own list of situations including all of the variations listed by Pervin: listing the situations, describing them, describing feelings in each, describing behaviors in each, and indicating how they are inter-related. By factor analyzing the list of situations, a small number of situations representative of the person's current life would emerge. The person would then apply the BSRI list of characteristics to each of the representative situations. In this way, a clear picture would emerge of how the person's sex role orientations vary over time and space.

Story Completion. The next suggested measure is designed to (1) determine the salience and persistence of sex role constructs for the person and (2) validate the conception that one can differentiate people who are same sex typed, cross sex typed, androgynous or transcending according to certain situations. Furthermore, this measure would be able to assess the process by which she/he "elaborates" her/his self concept--by dilation or constriction or both (Kelley, 1955). Katz (1975) provides a good model for this measurement technique. She was interested in exploring how women cope with role conflict between family and career. In one section of her study, she presented the participants with hypothetical situations involving a role conflict and asked them how they would resolve it. The responses were coded according to four coping mechanisms: (1) structural role redefinition (hiring household help), (2) personal role redefinition (setting up personal priorities), (3) fluid personal role (the woman tries to do everything), and (4) rejection of role (quitting her job). These categories can be used to indicate sex role orientation according to our model. A combination of the first two would be important in sex role transcendence. The third could be thought of as one type of androgynous response. The fourth could be either sex typed (quitting

a job) or innovative (establishing a career but getting divorced). We would adapt the hypothetical situations to the age level with which we were working, and perhaps, develop a slightly different coding system. The basic idea, however, is the same. As an example, participants would be asked to respond to the following hypothetical situation, explaining how they would behave, feel, etc.:

> A woman has entered a pre-med curriculum, enrolling in chemistry, biology, and other required courses. She is competent, but also cooperative, sensitive, and non-assertive. The environment in her classes is unilaterally competitive and cut-throat and she has trouble adjusting to this situation. What should she do?

After the participant responds to the open-ended question, she/he would be presented with four solutions to evaluate. For example:

1. She should drop out and major in Education.
2. She should take an assertiveness training course and learn how to be equally competitive.
3. She should appeal to her professors (or another student) for special tutoring.
4. She should organize a group of students to study together cooperatively and to help each other in labs and in preparing for exams.

The pattern of responses to a number of hypothetical situations would indicate how often the person's responses revolve around sex roles. Additionally, one would be able to tell if the person's responses were consistently sex typed, cross sex typed, androgynous or transcending (or if the person varies along this dimension depending on the type of situation). Finally, one would be able to get an idea of how the person "elaborates" her/his self concept indicating possible points of intervention. For example, if the person consistently uses a constricting process (e.g., a woman who chooses the traditional female option) except for one arena (e.g., athletics in which she excels) it would be possible to use this one arena as a point of entry in order to show the value of incorporating new role definitions into her self concept (dilation).

Personal Constructs. The third measure is taken directly from Saavedra (1976). Saavedra asked children (5th through 8th grade) to list ten girls and ten boys of their own age who they know well. He then presented them with hypothetical situations and asked the children to sort the names according to who would or would not fit that situation. For example, "While the teacher was away, ten of these children were joking and laughing, while the other ten were busy working. Which ten would you guess were joking and laughing?"

(Saavedra, 1976, Appendix B). The pattern of responses would indicate whether or not sex role constructs were constellatory (consistent sorting on the basis of sex) or propositional. Saavedra's measure directly relates Kelley's personal construct theory and a version of Rosenberg's work to our model.

The three sets of measures make use of a variety of fixed format and free response techniques. They assess both personal and situational flexibility, and within a particular research design and intervention program can assess the development and change of sex role orientation.

VII. B. Advocate Model of Intervention

The three sets of measures just described are consistent with both the dialectical perspective which we have used as a basis for our work and the concept of organic education (Ashton-Warner, 1963; Fader, 1971; Freire, 1971). First, these measures allow the participants in the system (students, teachers, administrators, etc.) to indicate for themselves where they are in terms of sex role development--what issues and situations are important for them. Second, the measures used over time provide a basis for the dialogue which is necessary for change. We will not define a detailed intervention program, but merely outline those conditions and specifications which are necessary to carry out the intervention in line with our general perspective.

We are suggesting a type of program which might meet the real objections of the educational establishments to governmental intervention, provide a positive force for transcendent education, test our sex role socialization model of discrimination and perhaps even provide job experience for female educational administrators presently unemployed (due to the prejudice of local school boards and discriminatory factors in higher education). That is: the creation of a cadre of sex role change advocates (both professional and non-professional) who would serve as temporary consultants to school and college administrations in order to facilitate institutional change and personal growth.

The advocate program staff would be responsible for developing and operating a program of advocacy that operates both within the organization (e.g., developing a caucus of female administrators; training male administrators who work with women in administrative positions; assisting affirmative action programs in sub-units; advising Title IX coordinators; developing a support-group of Title IX coordinators in building units, writing and distri-

buting a newsletter on sex discrimination, distributing bibliographies, reprints, books, etc., from other organizations) and outside the formal organization with various community groups with a vested interest in what goes on inside the institution (e.g., developing a women's athletics booster organization among alumni, parents, and community businesses; forming a women's caucus in the secretarial union; forming consciousness-raising organizations cutting across faculty, staff, students, parents; setting up a feminist caucus among School Board and Citizen Advisory bodies).

The team of advocates (paid and/or volunteer) would be formed from within the system representing the various constituencies (students, teachers, staff, administrators, parents, relevant community groups).

The program that the advocate team develops would derive from the results of the first round of measures described above as well as from collaboration with the various constituencies. The methodology suggested by Friere (1971) is applicable to how an advocate team in the schools defines an agenda. First, the team must become thoroughly familiar with the context via secondary and primary sources including collaboration with members of the group to be studied. She/he should also be capable of "sympathetic observation" and be able to share (rather than impose) a perception of the participants' world. Although some social scientists (e.g., anthropologists) are aware of the problems attendant on intruding into the lives of the people being studied, it seems that more care is taken by others when "going into the field" to study apes than when studying humans.

As the investigator begins to construct a model, she is constantly checking perceptions with collaborators. Through active dialogue the impressions are transformed to reveal the critical dimensions of the situation and indicate tasks to be undertaken. A model may take different forms; Friere uses sketches or photographs, depending on what is most relevant to a particular population. The model or codification must be in accord with participants' internal constructs, and they must be able to interpret it. By decoding or interpreting the investigators' model, the participants pose to themselves the problems with which they will grapple and will re-present their constructions of the world. After a model has been proposed, the investigators list and classify themes in order to develop projects and didactic material. This method involves the population to be studied in the design as well as in the "manipulation" of the research and its later evaluation. The entire project then is organic to the context and to the population. Both the population being studied and the investigators change in the process of developing a model.

The concept of "collaborators" is crucial to the success of the advocacy team and to our understanding of the structural nature of the team. We envisage increasing decentralization, with control and resources being distributed to each constituency group via the collaborators or representatives of the groups. By defining the problem from the bottom up and by locating control with the people to be affected, motivational impetus would be maximized. The advocates themselves would serve merely to coordinate and facilitate (in the least directive meaning of the word) the activities defined by the participants.

The procedure can result in any number of actions, e.g., setting up task forces to work on textbooks, hiring policies, teacher-student relations, etc.; establishing coalitions between constituencies, e.g., community groups and students to establish a course on feminism, and etc.

Communication in either direction would be facilitated by such mechanisms as a newsletter, workshops, meetings, etc. We conceive of communication as distinct from responsibility and autonomy. The team would be autonomous in terms of specific tactics and strategies.

The organic approach to intervention and education can include or be supplemented with more explicit attempts to deal with the indicators of institutional sexism as described earlier.

As the list of indicators of sex discrimination illustrates, the problem of ending sex discrimination in education can be viewed as futile. The problem is exacerbated due to the differences between school districts (e.g., racial make-up, politics, geographic location, etc.) each of which manifests a different configuration of discriminatory practices. We can, however, outline some basic activities from which the ultimate program will be derived.

1. Data Collection and Feedback. This would provide information by which to evaluate the "state of affairs" in the particular school (district, system?) incorporating the indicators of sex discrimination as well as examining the organizational patterns, values, norms, goals, etc., of the school. This would aid in both needs assessment and providing baseline data against which evaluation can occur.

2. Information Dissemination. This would provide the conceptual framework of sex role development and the goal of sex role transcendence as the cognitive component on which to base future activities.

3. Range of Options. This would indicate a range of options and possible strategies for consideration by the advocate team. Such a list would be non-directive and should only serve an exemplary function.

The advocate team would participate in the needs assessment and additionally would prescribe particular strategies of action. There is not a single program. Rather, change strategies will be developed at several levels. Individual constituencies could define a particular problem area, for example, male high school students might set up a course and curriculum on parenting. A problem area might also be defined by a coalition of constituencies. Female students and female teachers might organize an effort to recruit and hire more female teachers. The motivation for the two groups might differ (female teachers wanting to increase their numbers in order to have more decision making power; female students wanting more role models), but the objective would be the same. Additionally, the advocate team as a whole could define foci (e.g., major curriculum changes) which would involve all constituencies. Decision making about the strategies would take place on all levels, each level being autonomous, but linked in communication to the other levels.

Built into the advocate program is a system of multilevel feedback and evaluation. Evaluation would take place at the constituency level in terms of the particular tasks each has defined for itself. Evaluation would also go on at the team level in terms of moving toward sex role transcendence on the part of the individuals and the elimination of sex discrimination on the part of the institutions. Three issues emerge here which are unique to our particular program. First, we conceive of the elimination of sex discrimination as a long term process which necessitates the inclusion of the advocate program as a permanent structure within the institution. Evaluation, then, would be in terms of this time perspective. Second, since the concrete, action part of the program is developed by the constituents in consultation with other participants of the program, strategies and foci and ultimately the evaluation will differ depending on the community involved (class, race, ethnicity, etc.). Third, there is the potentiality and necessity of multi-level change since the program is based on multiple constituencies. Therefore, although the ultimate goal is sex role transcendence and the elimination of sex discrimination, evaluation occurs at a number of levels, for multiple groups and within a particular long-term time perspective.

VII. C. Research Design

The basic research design proposed here is an experimental intervention into a selected sample of schools and colleges with a program of advocacy of women's educational equity. The advocate program is grounded in a theory of

sex role development which asserts that there are stages beyond the conventional hyperpolarized conception of sex roles--in particular an androgynous merger of masculine and feminine characteristics (Stage IIC) and a transcending of sex roles (Stage III), freeing development for genuinely human concerns.

Results will be measured in terms of individual changes in sex roles (from IIB to IIC to III) and in terms of organizational indices of sex discrimination. The results of the experimental intervention will be contrasted with a number of other conditions: the pre-experimental situation in the target organizations; matched control organizations which have approximately as vigorous an intervention as our experimental one, but not based upon our model of sex role development (in view of what is going on now in schools and colleges, we call this the "Title IX" affirmative action intervention); and matched controls in which there is no program (or only a minimal one) actively seeking educational equity for women.

We are interested in changing sex-discriminatory patterns at every level of, and in every type of, education. In view of limited resources available for these experimental studies and for the long range solution to the problem, strategic choices must be made. We choose to concentrate the effort in this study on public education, and on the segment of education between kindergarten and the completion of college. There are numerous reasons for those decisions. The most important are that education before kindergarten is typically private, scattered, and not nearly as accessible to large-scale public policy decisions. Professional education beyond college is highly specific in content, and in our view, it is heavily affected by sex-discriminatory practices at earlier levels. Private educational efforts are relatively smaller than public ones--much smaller for most regions of the country and levels of education. This is not to deny that those areas are presently very important, crucial to change, and capable of being studied. Rather, it is a priority judgment based upon the relative ease and importance of each of these areas for this first study.

Organizations: With these considerations in mind, six organizations of each of the following types will be selected for the study by the matching process described below:

1. Small or medium-sized school district, the entire system (e.g., Jackson, Michigan schools).
2. Large school district; a regional part with autonomous decision-making power (e.g., Region IV, Detroit schools).
3. Community college (e.g., Lansing, Michigan Community College).

4. Public University, primarily 4 year (e.g., Bowling Green State University), entire university, with special emphasis on the School of Education.

5. School of Education at a major university (e.g., School of Education, University of Illinois).

Two of each category would have to be organizations that presently have only minimal programs or no programs aimed at achieving education equity for women; the others must be willing to have active programs. Other than that characteristic, all six within each type would be matched within broad limits on the characteristics described below.

Timing: Because of the possibility that the extensive pre-testing of the measures of educational equity and sex role attitudes will in themselves produce substantial changes, each pair of matched organizations in the same experimental condition will be randomly assigned to either a post-test only condition or to a pre- and post-test condition.

Thus, the thirty organizations in the study can be classified in the following manner:

Organization	Post-test only	Pre- and Post-test
1. Small/medium school district	SRT Intervention Title IX Intervention Minimal Program	SRT Intervention Title IX Intervention Minimal Program
2. Large school district: regional part	SRT Title IX Minimal	SRT Title IX Minimal
3. Community College	SRT Title IX Minimal	SRT Title IX Minimal
4. Public University	SRT Title IX Minimal	SRT Title IX Minimal
5. School of Education	SRT Title IX Minimal	SRT Title IX Minimal

Furthermore, because of the fact that the situation with regard to sex roles and sex discrimination is rapidly changing in our society at the present time, (i.e., rapidly compared to the time span of the experiment and its intended application) it is necessary to make further adaptations in the design. The most important one is that successive cohorts will be added to the study on a yearly basis. In conventional terms, there will be replications of the entire experimental design beginning once a year. Thus, at the end of the three year study there will be the initial study, with three yearly measurement points, a second study with two yearly measurement points and a third study with only

the pre-test measurements completed. These additional cohorts are essential for the ability to safely interpret results as due to experimental interventions or to cultural-historic change or to their interaction (Sequential Design, Nessleroade and Baltes, 1974). This design is even more essential for future generalizations from the results. The successive cohort design is also critical to a utilization of the dynamism and flexibility inherent in our advocate program. After the interventions have been underway for a year, a new advocacy program can be designed which takes advantage of the year's learning. It is obviously impossible to spell out in advance what these changes will be, but they might involve, for example: restructuring the advocate team to include a man to train and consult with male administrators; extending the intervention to include pre-school programs that feed into an elementary school; or more extensive training in sex-role transcendence and organizational change techniques for change-team members.

Therefore, we may diagram the time schedule of the experiment in the following manner (assuming that the study lasts three years, beginning in January, 1978): [for simplicity, we assume that the major measures used are collected at yearly intervals. Many variables will in fact be measured over much shorter time spans, but the design principles do not change.]

		1st Cohort	2nd cohort	3rd cohort
1978	January	Study begins--initial sample of 30 organizations selected		
	May	1st wave Pre-test		
	September	1st wave Intervention begins		
1979	January		2nd sample of 30 organizations selected	
	May	1st wave one year test	2nd wave Pre-test	
	September		2nd wave Intervention begins	
1980	January			3rd sample of 30 organizations selected
	May	1st wave two year Post-test	2nd wave one year test	3rd wave Pre-test
	September			3rd wave Intervention begins
	December	Final write-up, first three years of experiment		

One concrete result of this replication design is that the final results in December, 1980, are not "three years out of date," but rather already incorporate the changes and creative ideas gained during three years of experimentation.

Matching: The purpose of matching organizations is to control for the effects of extraneous variables on the measures of sex discrimination and sex role transcendence. We select for matching those variables that seem to us to be likely to have a major influence on the outcome measures. Matching is frequently described as if it were an alternative to randomization (as it sometimes is in post-hoc analyses of "natural experiments"). However, in pre-planned experiments, it is only a supplement to randomization. Whenever possible, assignment of organizations to treatment conditions is done randomly following the matching process. This is always true, for example, in the decisions about which organizations will have pre-test and post-test measures and which will have only post-tests.

Unfortunately, it is not always possible to make strictly random assignments to all treatment conditions. For example, the minimal program controls must be districts and colleges in which we have reasonable confidence that they will not have any extensive program for dealing with sex discrimination over the three years of the study. The "Title IX" intervention, on the other hand, must be carried out in districts which will, on their own without our direct intervention, implement a program to deal with sex discrimination. The SRT groups, in turn, must agree to accept our intervention. Thus, the triple of organizations of any one type will be matched on crucial variables, but will be known to differ explicitly on their willingness and initiative in having a program to deal with sex discrimination.

The matching variables will be somewhat different for each type of educational organization; it makes some difference whether we are talking about a school district that accepts all students from a given geographical area; a Community College that applies criteria of differential admissions to students, most of whom are from a given area; or a college or university which draws a student population from a wide geographical area and whose students may not be characterized at all by the local demographic parameters. Thus, some of the matching variables below apply to all types of educational organizations (e.g., region of the country) while others apply only to one or two types.

Matching Variables

1. Geographic variables:
   - Region of the country, state.
   - Rural, small or medium size town, suburban, urban.
   - Closeness to metropolitan area.
2. Student variables:
   - Race, ethnicity, religion, degree of homogeneity.
   - Social class, socio-economic status.
   - Percentage of working mothers.

3. Organization variables:
   - Size; number of staff, students, budget.
   - Parental involvement.
   - Community involvement.
   - Admissions alternatives: private schools, voluntary transfers, etc.
   - Sex distribution.

4. Sex discrimination variables:
   - Expert judgment of status on sex discrimination.
   - Status on program and/or program plans for Title IX, Affirmative Action, etc
   - Pre-test measures on attitudes and organizational variables.

Variables, parameters and measures: Scattered through the earlier discussions in this report are mentions of a large number of variables and measures that will provide the concrete indications of the interventions undertaken and their impact on sex discrimination (Section VI) and on the sex role development of the participants in the system (Section VII.A.). It should be clear that there is a considerable overlap between the measures required for effective feedback concerning the advocate program and the measures which are needed for research purposes to compare the different groups and organizations.

It is also true that it is impossible to completely specify in advance all of the measures that will be used. Sex discrimination is undergoing very rapid change at this particular point in historical time. Measures on any one variable or several closely related variables may be misleading or even related to their apparent content in a negative way as pressures develop for compliance with Federal and State standards of non-discrimination. This is to say, factors which enter into easily observable measures of sex discrimination may be deliberately manipulated in organizations which are under threat of losing money or legitimacy. Variables indicative of sex discrimination in one context may indicate changes away from discrimination in organizations at a different stage.

For example, organizations which rapidly move women into administrative positions may come out as the most discriminatory when "equal pay for equal work" comparisons are made, because the large number of new entrants to administrative positions should be in the lowest parts of the respective salary ranges. On the other hand, another organization with the same pay statistics may be one in which women are consistently put into low-level administrative jobs, denied access to informal channels required for moving up and for performing the job successfully, and then rotated out.

The organizational unit of the research (an educational organization) is an intelligent and adaptive system, fully capable of understanding research designs and their consequences. The only possible approach is an equally flexible

one, that changes in response to new situations, adaptation, evasion and new creative inventions. There is no such thing as a completely general solution to this problem. What we can spell out in advance is the overall goal of our evaluation research program and some strategies for reaching those goals, not the complete details of what will happen for three years.

An important aspect of this usually neglected necessity for a flexible evaluation strategy is discussed by Edwards, Guttentag and Snapper (1975) under the heading of "The Baseball Statisticians Approach." As they indicate, this approach:

> characterized a very common and in many ways very sensible approach to evaluation research, one rather unlike the experimentalist's . . . the baseball statistician wants to describe a phenomenon as thoroughly as possible. So he gathers information about the program he is evaluating. He then reports it . . . [in] essentially narrative descriptions of what happened . . . . When this approach is applied to anything as complicated as a large social program, it is likely to be costly and voluminous. It is also quite likely to be useful . . . . As owners of the Kinsey reports will agree, a massive unreadable book with an indexing system that permits retrieval of an occasional stimulating statistic can be a useful and appealing product of a research project. (p. 146)

One particular component of this is the dual usability of the stream of data, as part of the ongoing process of feedback in the immediate situation of the change agent, and as the raw material of the final evaluation. Because the change agents are faced with the continually changing situation, they must continually invent the relevant measures to keep informed about the changing nature of sex discrimination. In turn, their record of the process of being change advocates is the basis for one input into the final evaluation. Of course, the changed measures and indices developed in the advocate process will also be applied in the control-group organizations, to preserve comparability in all crucial respects.

Our model focusses developmentally on the individual, but also predicts consequences for the organizational parameters. Our conflict model of organizations posits that there are multiple constituencies with competing and conflicting interests and values. Therefore, this requires the identification and separate measurement of many constituencies: top management; supervisors (middle management); teachers; non-teaching employees; student leaders; students; parents; community groups; etc. It will not be assumed that cross-cutting variables such as race, class, ethnicity, religion, age are unimportant; thus, each of these represent the possibility of still further subdivisions of

interest groups. Depending on patterns of leadership, identification and so on, there may be other cross-cutting patterns that are critical--departments, schools, school buildings, etc.

In conventional evaluation research, there is one (or more) criterion variable; the outcome measure against which all else is tested. In that conventional sense, our criterion measures are; on the one hand, measures of movement to Stage IIC and III; and, on the other hand, all of the indices of reduced sexism at the institutional level, and our independent variable is the introduction of an advocate program based on the model of sex role transcendence.

However, we view the entire process as one of mutual (not one-way) causation, and of interaction between sexism and sex role development. From a dialectical perspective, we place major emphasis on the contradictions and conflict within the system as causes of change. We predict that the largest movement toward Stage IIC and Stage III will occur not among those people in non-discriminatory and non-sexist educational settings, but among those most actively engaged in the struggle against sexism. Therefore, we would expect the largest shifts in sex roles among the full-time change agents in our advocate program who are in the "worst" organizational settings and large shifts among the advocate teams recruited in each setting.

Thus, in our conceptualization, it is not a matter of changing people's sex roles in order to end sex discrimination in education. Rather, the processes of changing sex roles and changing sex discrimination interact with each other to change sex discrimination and to change sex roles.

VIII. SUMMARY

According to our model of sex-role transcendence, sex discrimination occurs because individuals and institutions are stuck at an intermediate and incomplete stage of sex-role development. In our three stage model sex-role development proceeds from undifferentiated roles (Stage I, infancy to early childhood); to differentiated roles (Stage II; subdivided into three sub-stages: IIA, the earliest age at which differentiations are learned but not necessarily consistently practiced; IIB, hyperdifferentiated feminine and masculine roles; and IIC, in which feminine and masculine roles are still differentiated, but an individual woman or man is able to engage in either as the situation requires [androgyny]); to transcending of sex roles (Stage III, a pluralism of possible roles, over time and over people, not linked to

biological sex and not limited to presently available roles).

Society (including social science) presently fails to recognize this full developmental sequence, and instead regards IIB (hyperdifferentiated sex roles) as the "end point" of normal sex-role development. Therefore, individuals are constrained to truncate development at Stage IIB, and discriminatory institutional and organizational practices are made to "fit" IIB people. Nonetheless, many people already violate the rigid stereotypes and move on to Stage IIC and toward Stage III of sex role development. In our view, the explicit encouragement of further individual development (to IIC and III) and institutional change in the direction of facilitating and accomodating such changes will lead to the end of sex discrimination.

Our model asserts that sex discrimination in education can be ended by changing the people (students, teachers, administrators, parents . . .) in educational institutions toward Stage IIC and Stage III sex role development and simultaneously changing institutional structures, patterns, and goals so that they are non-discriminatory and facilitating of such people. Therefore, the test of our model involves experimental intervention in selected school districts and colleges with an advocate program designed to carry out such changes, by working with constituencies of students, community organizations, parents, and employees, in training, social change, support networks, etc. Crucial control groups would consist of comparable organizations with no program attacking sex discrimination, and other organizations with change strategies predicated on other models of eliminating sex discrimination. Evaluation of the program is described in terms of measures of individual sex-role development and measures of changes in indices of sex discrimination in the organizations.

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Chronological List of Publications, Papers, and Addresses Associated with this Study

1. National Institute of Education (NIE). Development of Conceptual Models of the Processes Involved in Sex Role Learning and Sex Discrimination in the Educational System. Request for Proposals, March 18, 1974. RFP # NE-R-74-0014.

2. Hefner, R., Nordin, V. D., Rebecca, M., and Oleshansky, B. A model of sex-role transcendence; Role polarity and sex discrimination in education. Proposal submitted in response to RFP-NE-74-0144. May, 1974.

3. Oleshansky, B., Rebecca, M., Nordin, V. D., and Hefner, R. Institutional sexism. July, 1974. Report to NIE on Contract # NIE-C-74-0144.

4. Hefner, R., Nordin, V. D., Rebecca, M., and Oleshansky, B. (Delivered by Hefner) VIth World Congress of Sociology, Toronto, August, 1974, Paper on "Sex Role Transcendence."

5. Hefner, R. International Workshop on Changing Sex Roles in the Family and Society, Dubrovnik, Yugoslavia, June, 1975. Paper on "Ideology of Female-Male Interaction."

6. Rebecca, M. International Workshop on Changing Sex Roles in the Family and Society, Dubrovnik, Yugoslavia, June, 1975. Paper on "A Dialectical Approach to Sex-Role Socialization."

7. Rebecca, M. Conference on Dialectics: Paradigm for the Social Sciences. Toronto, August, 1975. Paper on "Dialectics of Sex Roles."

8. Hefner, R. Conference on Dialectics: Paradigm for the Social Sciences. Toronto, August, 1975. Paper on "Dynamics of Social System Changes in Sex Roles."

Conference on "Dialectical Approaches to Sex Roles." Chicago, August, 1975. Papers by:

9. R. Hefner. "Ideology of Female-Male Interaction."
10. M. Rebecca. "Dialectics of Sex Roles."
11. B. Oleshansky. "Is Stage II Necessary."
12. N. Datan. "Male and Female: The Search for Synthesis."
13. H. Melnick. "Why Polarization Persists."
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15. Rebecca, M. American Psychological Association, Chicago, September, 1975. Paper on "A Dialectical Approach to Sex Role Socialization."

16. Rebecca, M., Hefner, R., and Oleshansky, B. (Delivered by Oleshansky) American Psychological Association, Chicago, September, 1975. Paper on "A Model of Sex-Role Transcendence."

17. Hefner, R., Rebecca, M., and Oleshansky, B. The development of sex role transcendence. Human Development, 1975, 18, 143-158. (Reprinted in K. Riegel (Ed.), Development of Dialectical Operations. Basel: Karger, 1975.)

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19. Hefner, R. National Education Association Conference, Washington, February, 1976. Paper on "Sexism in Language."

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21. Rebecca, M., Hefner, R., and Oleshansky, B. A model of sex-role transcendence. Journal of Social Issues, 1976, 32(3), 197-206. (Reprinted in A. Kaplan and J. Bean (Eds.), Beyond Sex Role Stereotypes. Boston: Little Brown, 1976.)

22. Rebecca, M. Conference on Dialectical Psychology, Craigville, Massachusetts, 1976. Paper on "Biographical Methods in Fertility Research."

23. Oleshansky, B. American Psychological Association, Washington, September, 1976. Paper on "Sex Role Transcendence."

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Since the Final Report of the Legal Portion of this study is published separately, publications, papers, and addresses associated with that portion of the study are indicated there.

Note on Availability:

#s 17, 20, 21, 25 are published materials, available from libraries, publishers; and university microfilms;

#s 1, 2, 3, 18, 24, 26 are official reports of or to the National Institute of Education, available from them (for copying costs). [Women's Research Program, National Institute of Education, Room 815K, 1200 19th Street, N.W., Washington, D.C. 20208]

#s 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 19, 22, 23 are addresses given from note or drafts, and are not available as such. Subsequent publications have incorporated much or all of these materials; see:
24 for #s 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 15, 16, and 23;
26 for #22;
and Sex Discrimination in Education Newsletter, Vol. II, No. 6, August, 1977, for # 19 [Sex Discrimination News, Department of Psychology, University of Michigan, Ann Arbor, Michigan 48109, $1.00 single issue, $6.00 for entire Volume.]